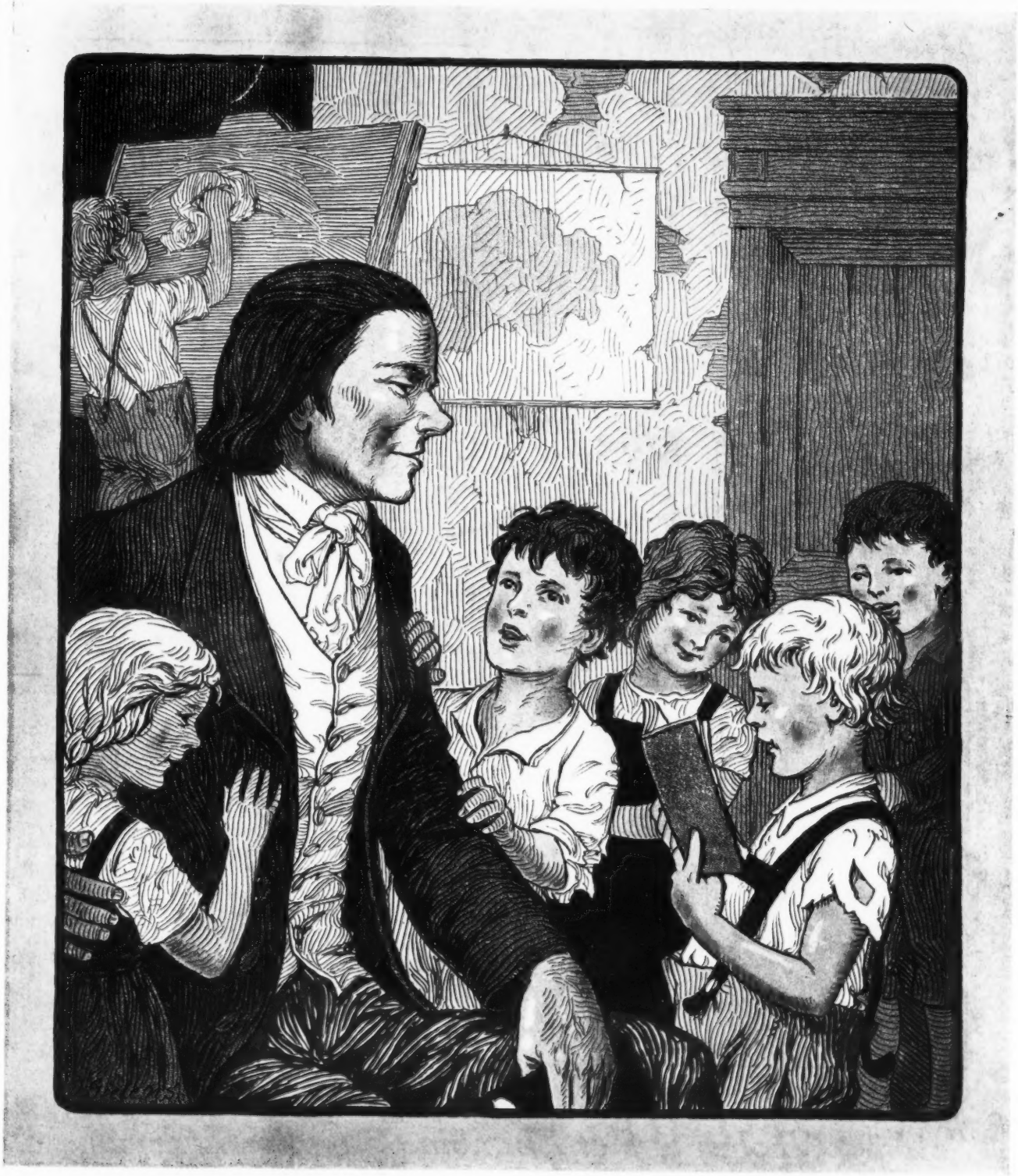
PERIODICAL ROOM
GENERAL LIBRARY
UNIV. OF MICH.

SEP 3 1927

THE AMERICAN
School Board Journal

A PERIODICAL OF SCHOOL ADMINISTRATION



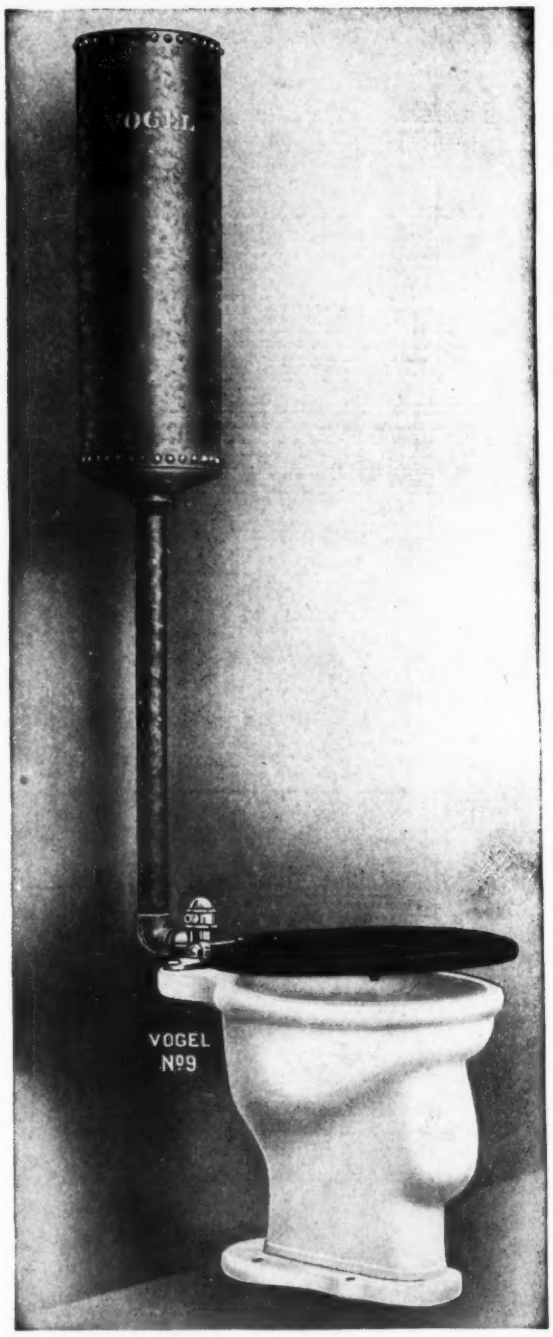
SEPTEMBER, 1927

The Bruce Publishing Company, Milwaukee, Wis.

VOGEL

PATENTED

Number 9 Automatic School Water Closet



This closet is made to stand the rough usage of the school water closet.

Economical in the use of water.

Seldom requires repairs.

Easy of access when repairs are necessary.

The simplest and most durable automatic water closet.

Many Thousands in use.

Sold by Wholesalers of Plumbing Supplies Everywhere

JOSEPH A. VOGEL CO.

Wilmington, Delaware **St. Louis, Missouri**

WHEN NATURAL SLATE BLACKBOARDS ARE INSTALLED—

"WE WILL HAVE LIFE-TIME PERMANENCY!"

These are the very words of one of Natural Slate Blackboard's Thousands of Users — D. E. McKinley, Business Manager of the Board of Education of Birmingham, Alabama. (Read his letter below.)

They are Sanitary, Dustless, Fireproof, Easy-to-Clean, Easy-to-Write-On. No matter how long after installation, they are always like new. This life-time permanency means that first cost is their only cost.

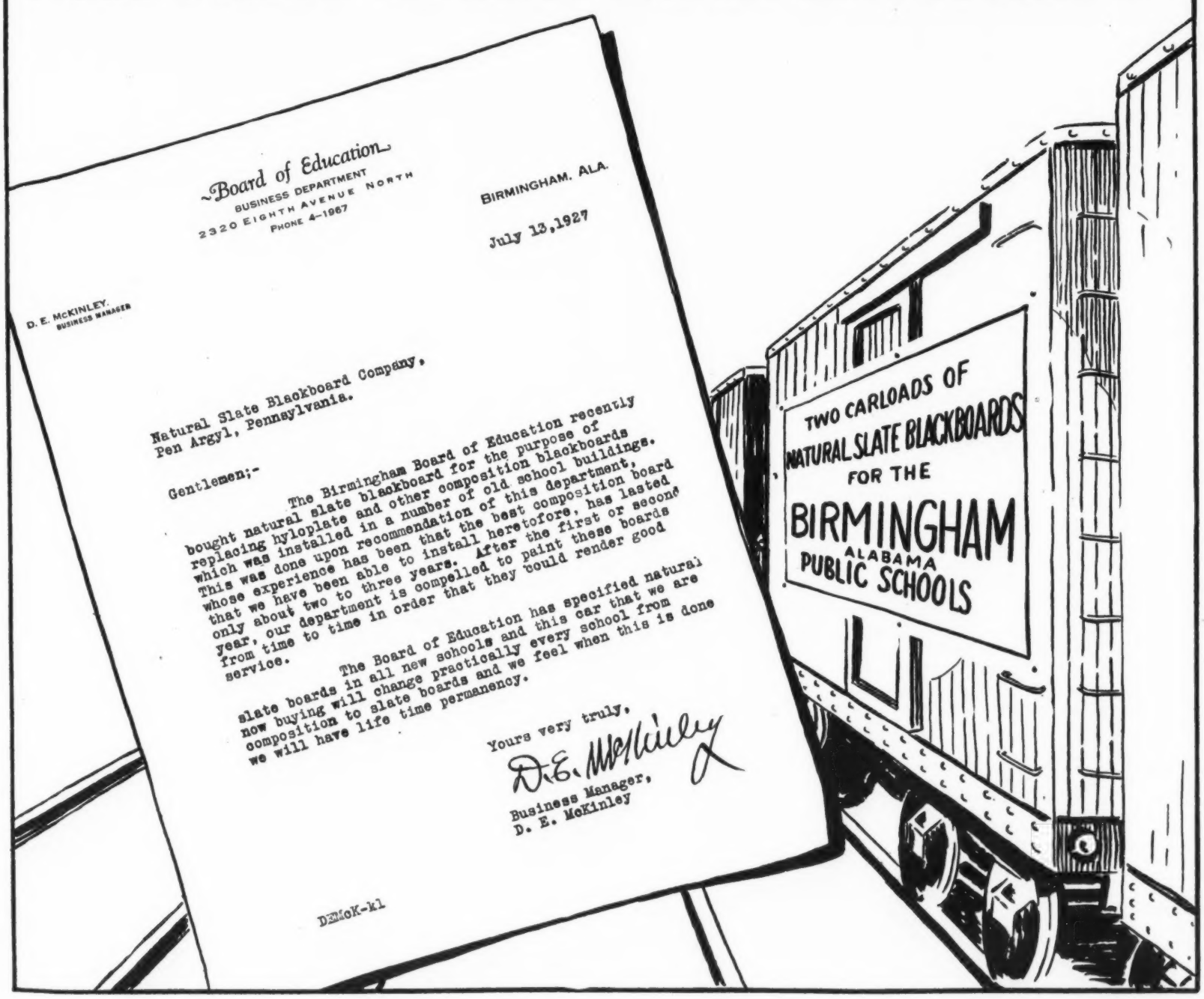
Write for interesting data and information on Natural Slate Blackboards.

NATURAL SLATE BLACKBOARD COMPANY, 108 Robinson Ave., Pen Argyl, Pa.

BRANCH OFFICES

BOSTON	NEW YORK CITY	BUFFALO	WASHINGTON	ATLANTA	PHILADELPHIA
PITTSBURGH	KANSAS CITY	TORONTO	CHICAGO	ST. LOUIS	TAMPA
CLEVELAND	MINNEAPOLIS	MEMPHIS	NEW ORLEANS	LOS ANGELES	WACO
		CINCINNATI			

NATURAL SLATE BLACKBOARDS



Read This Recording Chart . . . .

A week in January, when the temperature out-doors ranged all the way from 7° below zero to 46° above, the Eastman Theatre heating system [Johnson controlled] gave a remarkable demonstration of its efficiency. During the entire week, despite the marked fluctuation out-doors, the temperature in-doors did not vary more than two degrees—remaining practically constant at 70 degrees, as the circling line on the recording chart here indicates.

Read Heating Engineer's Letter . . . .

"This letter is written to commend you on the perfect condition of the air maintained in the Eastman Theatre.

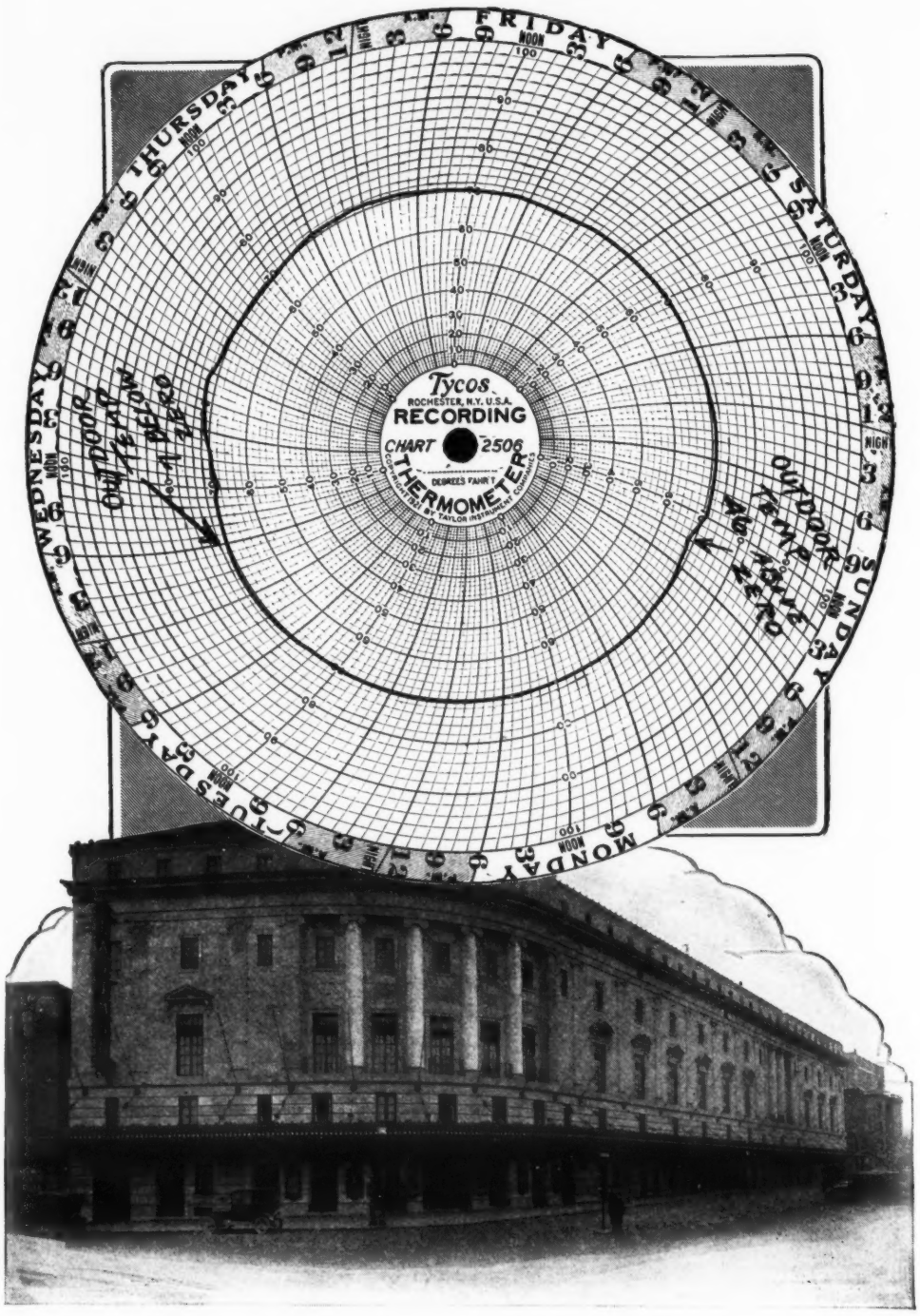
"One concert evening, with an accurate wet and dry thermometer, I took careful reading of the temperature and the relative humidity every half hour from seven forty-five until ten fifteen P. M. The temperature varied from sixty-eight degrees to seventy-two degrees Fahrenheit, and the relative humidity from forty-five degrees to forty-seven degrees.

"This bespeaks excellent control, as the theatre was filled to capacity that night and the readings were taken from the top of the balcony, where slight variations would be quickly noted.

"I think this proves that every seat in the Eastman is a good seat, from the viewpoint of ventilation. It also shows why we experience that feeling of ease and comfort in the theatre. The temperature is right, and the humidity, that invisible and essential but often misunderstood component of the air, is maintained at the proper percentage."

[Signed] Yours very truly,

Fred. W. Armbruster, Jr.
Heating & Ventilating Engineer
Rochester, New York



Eastman Theatre and Eastman School of Music, a George Eastman contribution to the city of Rochester, New York, shows this result and the remarkable efficiency of Johnson Heat Control: proving again the definite accuracy obtained, the definite value of Johnson Heat Control. . . . . .

Eastman Annex No. 2 Under Construction To Be Equipped With Johnson Control: 155 Johnson Thermostats, Controlling 140 Johnson Mixing Dampers, 52 Johnson Valves

JOHNSON SERVICE CO., MILWAUKEE

AUTOMATIC TEMPERATURE REGULATION SINCE 1885
JOHNSON BRANCHES IN ALL PRINCIPAL CITIES

KEWANEE

STEEL Riveted BOILERS

The *upkeep-cost* of a boiler extends over the whole period of its life. That means that in the first twenty-five years the *fuel cost alone* will have totaled an amount equal to from **six to fifteen times the original cost of the boiler.**

If the original cost of the boiler has been *too small* you may be sure that the fuel cost will be *too large*. So large, in fact, that the saving on the purchase price will be "sunk" in extra fuel during the first few months of operation. And this *extra fuel cost* must be paid every year.

Lower Heating Costs

When you buy a Kewanee STEEL Riveted Boiler your boiler bill is **"paid in full" but once in a lifetime.** You are buying a boiler which has proved its ability to provide the maximum amount of heat with the minimum outlay for fuel—a boiler which has in it the necessary material, both in quality and quantity, to stand the wear and tear of a long life.

These features guarantee *lower heating costs*—which are of far more importance than mere first cost of the boiler.

KEWANEE BOILER COMPANY

Kewanee, Illinois *Branches in Most Leading Cities*

STEEL HEATING BOILERS, RADIATORS, WATER HEATERS, TANKS AND WATER HEATING GARBAGE BURNER



EAST DENVER HIGH SCHOOL. George H. Williamson, Archt.



The Heart of the

SPENCER

VACUUM CLEANING SYSTEM

Standard Equipment
in over
1200 Schools

THE wide acceptance and use of Spencer Systems of vacuum cleaning in schools is the best evidence of the efficiency and dependability of the Spencer System in solving the school cleaning problem.

And to further emphasize Spencer preference, the majority of the schools of recent erection are being Spencer equipped. Among these is the East Denver High School, illustrated above. A complete list would include the finest and most representative educational institutions in the country.

The sound engineering principles underlying the multi-stage turbine and the thorough manner in which our engineers have worked out problems of vacuum cleaning, have established a confidence in the Spencer System that has resulted in its acceptance as the standard in vacuum cleaning equipment for school installation.

The recommendations of our Engineering Department may be obtained on any cleaning problem without cost or obligation.

Write for list of school installations and complete data regarding Spencer Equipment.

The Spencer Turbine Company
Hartford, Connecticut

83.05% Efficiency

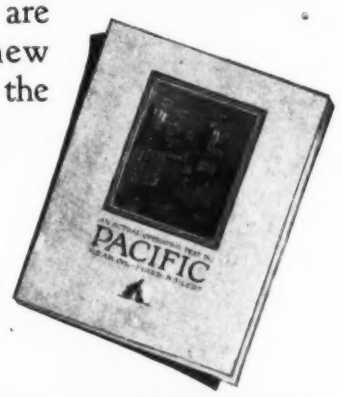
Not a Factory or Laboratory Test — an Actual Operating Test on a Notable Installation



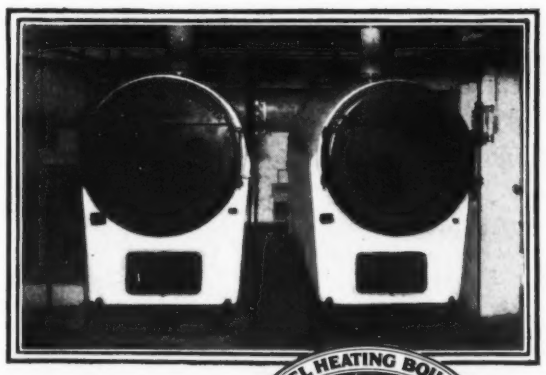
One of the most prominent construction projects on the West Coast — the Mark Hopkins Hotel in San Francisco —afforded the opportunity for this remarkable operating test on Pacific Steel Heating Boilers.

The unique conditions of the test give the results unusual significance. The boilers are standard units—actually installed and operating for five months before the test began. The test was conducted for the owners by an independent firm of consulting engineers, whose name carries weight in Western heating circles. Every factor establishes the credibility of the figures and makes them applicable to ordinary operating conditions anywhere.

Under these conditions, a No. 824 Rear Oil-Fired Pacific Boiler set a record of 83.05% over-all efficiency. Still more remarkable is the fact that efficiency dropped less than 7% when the boiler was operated beyond 150% of rating. According to a certified report by Leland and Haley, Consulting Mechanical Engineers, and a letter from Mr. Geo. D. Smith, managing director of the hotel, the boiler evaporated 15.96 pounds of water per pound of oil at the actual operating rating, and 14.78 pounds with the 52.4% overload. Photographs, curves, and complete test data are included in a new booklet just off the press. Write for a copy today.



Send for booklet containing certified reports of test, photographs of the installation, etc.



STEEL HEATING BOILERS PACIFIC WAUKEGAN, ILL. BRISTOL, PA.
TRADE MARK REG. U.S. PAT. OFF.

PACIFIC
STEEL HEATING BOILERS
FACTORIES: WAUKEGAN, ILL., BRISTOL, PA.

Von Duprin

Self-Releasing Fire Exit Latches

Sweets, Pages B1876-1879.

AIA 27c5

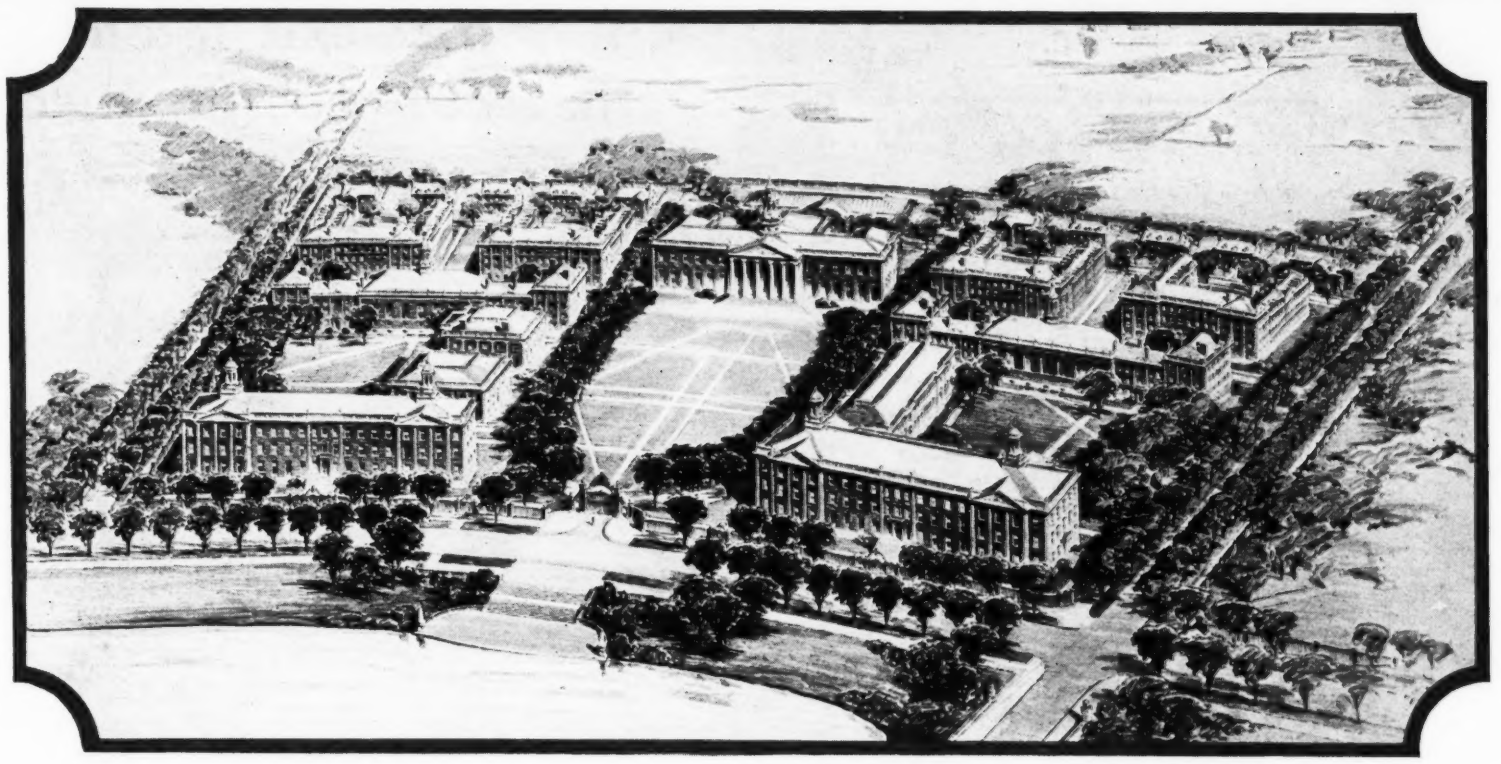
As a matter of cold economics alone, one life saved is worth--in money --the cost of all the Von Duprin latches on many school houses or theaters.

AIA

VONNEGUT
HARDWARE CO.
Indianapolis, Ind.

1852 *Our 75th Anniversary* 1927





The Harvard School of Business Administration, Cambridge, Mass. McKim, Mead & White, Architects. Equipped with Columbia Window Shades and Rollers.

In your case— blindfold buying is dangerous

THE man who buys window shades for a six-room house can (if he enjoys wasting money) afford to choose blindly. Suppose the whole job does have to be done over after four or five years. What of it? Two dozen new window shades won't ruin him.

But take a larger building—a school like yours, for instance—with whole batteries of windows, with thousands of square feet to be shaded.

Replacing two or three hundred window shades and rollers will punch a real hole in your maintenance budget.

Replacing two or three hundred window shades might hold up important improvements—might prevent you from buying necessary new equipment.

"But," you object, "isn't any window shade buying that I do bound to be blindfold buying? I'm not an expert on window shades. And I can't spare the time to make myself an expert."

Then let us put you in possession of one fact that makes you *ipso facto* an expert on window shades:—

A recent survey brought to light the astounding fact that in many typical *Columbia* installations *the annual upkeep cost was running as low as 25 cents for each one hundred dollars of original investment.*

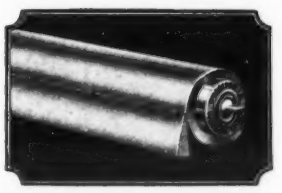
In school buildings—where hard usage is inevitable—we recommend *Columbia* Window Shades in Damasko Heavy Duty unfilled cambric shade cloth. It will not peel, crack or show pinholes. This closely woven, fine-textured fabric possesses the highest degree of durability.

So—remember the five words, *Columbia* Window Shades and Rollers. Remember our special Damasko Heavy Duty shade cloth. That's all you need know about window shades.

The *Columbia* Mills, Inc.

225 Fifth Avenue, New York

Baltimore Boston Chicago Cincinnati Cleveland Dallas Detroit
Fresno Kansas City Los Angeles Minneapolis New Orleans
Philadelphia Pittsburgh Portland (Ore.) St. Louis San Francisco Seattle



School executives realize the many advantages of having their window shades mounted on *Columbia* Rollers. They appreciate especially that smooth, noiseless operation of the shade wherever *Columbia* Rollers are used. This is due to an exclusive *Columbia* device that makes the roller entirely self-lubricating.

Your Time Saver

You can save time and trouble by using the "Standard Specification for Window Shades," which we'll gladly send on request. A specimen roller and samples of *Columbia* Cloth are sent with the specification. Just fill in coupon and mail to The *Columbia* Mills, Inc., 225 Fifth Ave., New York.

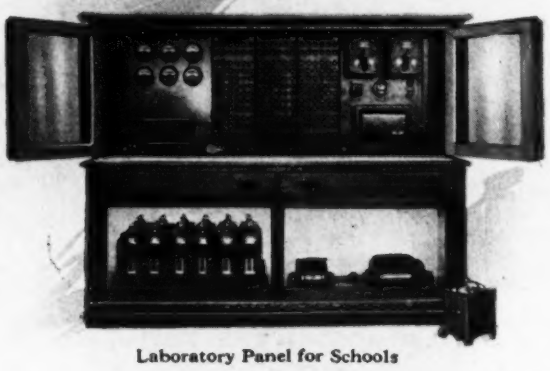
Name.....

Street.....

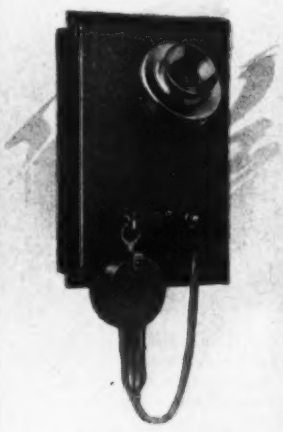
City..... S-9-27

Columbia GUARANTEED WINDOW SHADES *and* ROLLERS

Holtzer-Cabot Signaling Systems Apparatus



Laboratory Panel for Schools



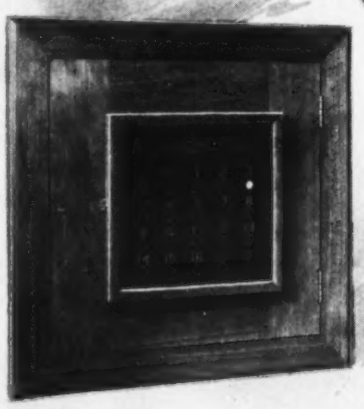
School Flush Phone

LABORATORY PANEL

A complete panel designed especially for use in High Schools and Colleges which have physical, chemical, or electrical laboratories and lecture rooms.

The instruments, wiring, and arrangement of the panel shown above have been based solely on the requirements of school laboratory work and the unit method of construction allows the making up of large or small panels to meet any requirement.

Full particulars will be sent upon request.



Masters Annunciator

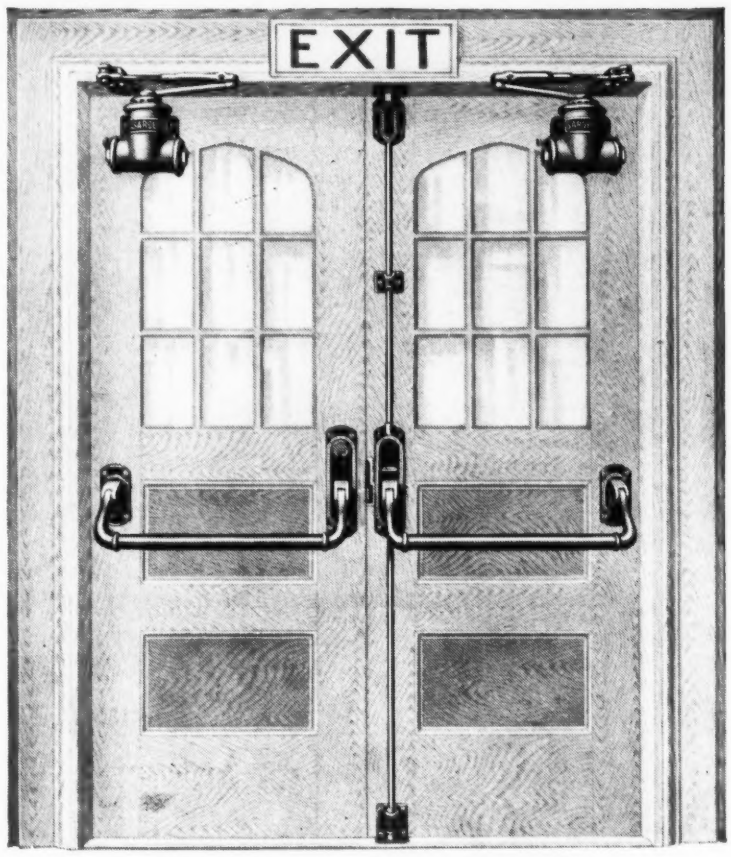
Manufacturers of Signaling Systems for over 50 years

THE HOLTZER-CABOT ELECTRIC COMPANY

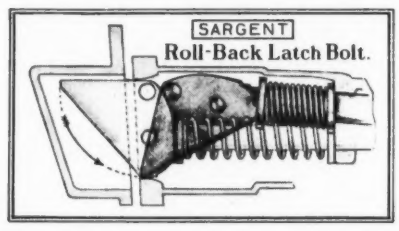
125 Amory Street
Boston, Mass.

6161-65 So. State Street
Chicago, Ill.

A new fire-exit latch bolt that *can't be jammed*



Not even the pressure of a panic-driven crowd can make the Sargent roll-back latch stick



School officials, who are responsible for the protection of the lives of the pupils and are anxious to make proper provision for quick exit in case of fire or panic will be interesed in this new development which has become the standard Roll-Back action for

SARGENT

Fire Exit Door Bolts.

The improved action is shown by the detailed drawing. The Cross Bar does not withdraw the bolts, but releases the deadlocking mechanism, allowing the bolts to be rolled back into the case of the lock as the doors are pushed open.

Security.

The Latches provide complete security and prevent entrance from the outside of the building when the school is not in session, while they can be arranged to permit entrance during school hours if desired.

Quick Exit At All Times.

is provided and in case of necessity the doors can be instantly opened by slight pressure on the handle Bars at any point.

Door Closers

close the doors, during their day by day use, quickly and quietly, the application shown in the illustration with the Sargent special foot (No. 35) being particularly desirable.

Pamphlet illustrating and describing Fire Exit Door Bolts will be mailed upon request.

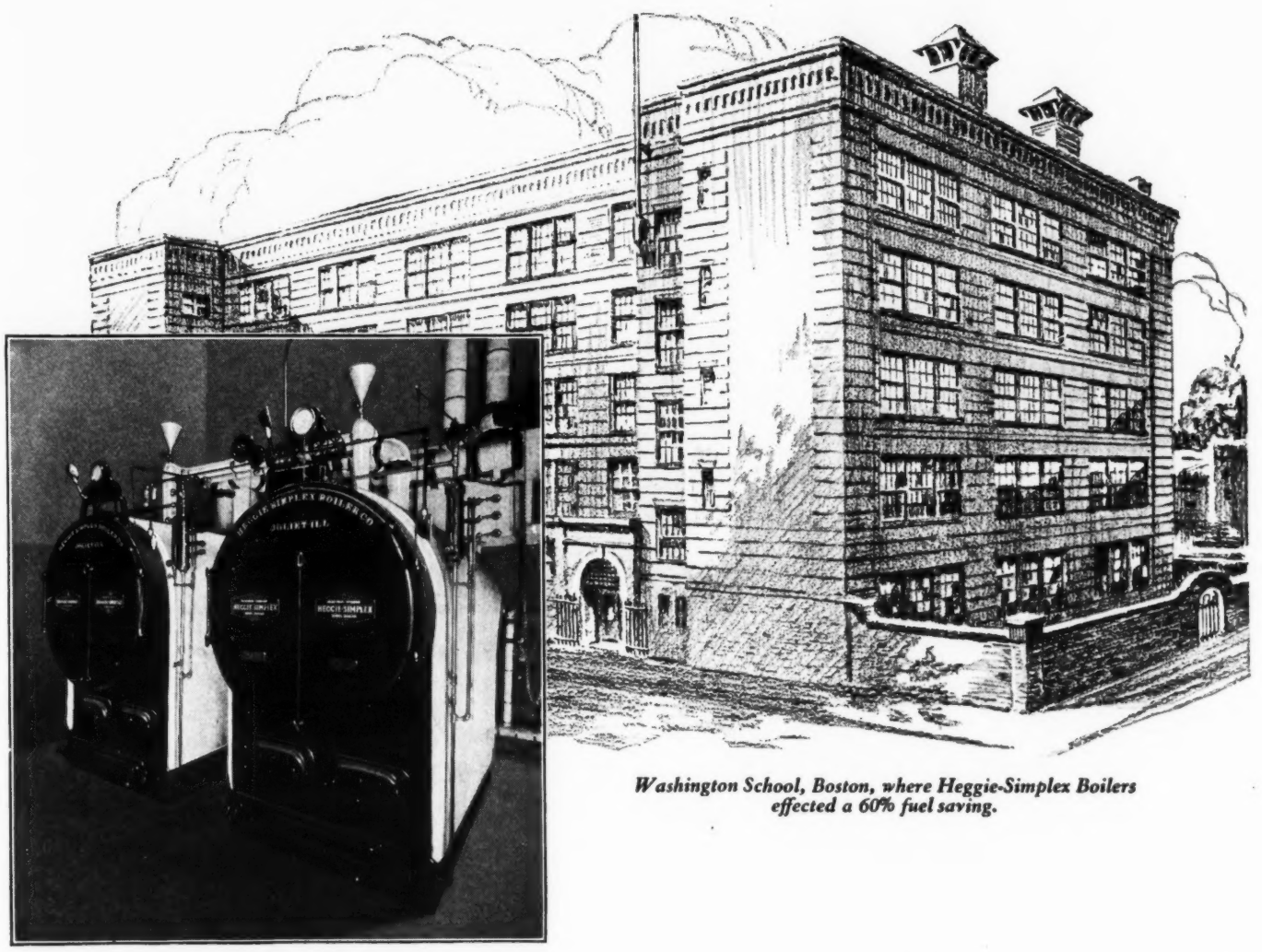
Sargent Fire Exit Door Bolts, Locks and Hardware are sold by representative dealers in all cities.

SARGENT & COMPANY

Manufacturers

NEW HAVEN, CONN.

New York Chicago



Washington School, Boston, where Heggie-Simplex Boilers effected a 60% fuel saving.

Boston Schools Report Marked Economy with "Heggie-Simplex"

INSTEAD of constant firing from four-thirty in the morning, all day long, the janitor of this Boston School now starts at seven, enjoys from two to three hours off at noon, and shows an average daily saving of 60% in fuel since the installation of Heggie-Simplex Boilers. The ease and readiness with which these boilers raise and maintain steam, make this saving possible. Similar economies are being realized in other Boston Schools where this most modern and highly perfected heating boiler is in use.

Heggie-Simplex Boiler Co., Joliet, Illinois. Representatives in principal cities — telephone and address listed under "Heggie-Simplex Boiler Company."

HEGGIE-SIMPLEX

ELECTRIC-WELDED STEEL HEATING BOILERS



CUT DOWN

Repair Bills!

Cut Out the Coupon Below

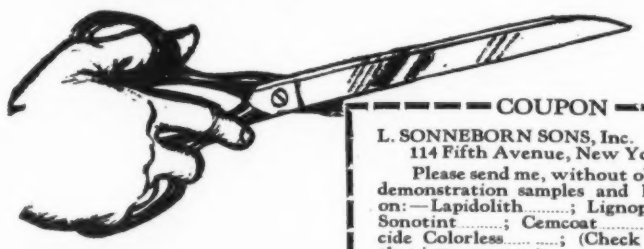
THAT constant drain for repairs on your school buildings certainly saps away your funds! A floor, a wall—something is always requiring labor and materials. How can you cut down the loss?

L. Sonneborn Sons can help you. We have long made a special study of the problems of keeping buildings in condition. We know what to do and how to do it at the most economical cost consistent with sound work.

We have developed the right treatment for each ailment your buildings may suffer: Lapidolith for making dusty cement floors granite-hard; Lignophol for hardening wood floors; Hydrocide Colorless for waterproofing brick walls; Cemcoat for providing a lasting, hard, washable, enamel paint surface; Sonotint for furnishing a durable, velvety, washable, flat finish.

Whatever your upkeep needs may be, consult us. Let us act as your "building physicians". We guarantee satisfaction with our products and with the saving we can help you make on repairs. Send coupon below for samples, literature and quotations.

L. SONNEBORN SONS, Inc.
114 Fifth Avenue New York



Mail Coupon for FREE Samples!

COUPON

L. SONNEBORN SONS, Inc. S.B.J.9
114 Fifth Avenue, New York

Please send me, without obligation, demonstration samples and literature on:—Lapidolith.....; Lignophol.....; Sonotint.....; Cemcoat.....; Hydrocide Colorless..... .....; (Check products that interest you.)

Name.....

Address.....

Company.....

Position.....

Craftsmanship in metal

The Sanymetal Symbol



St. Joseph's Orphan Asylum
Peekskill, New York

¶ **Yes, metal toilet and shower partitions are altogether the thing now, for modern schools.**

¶ **Most people, when they say metal, mean Sanymetal.***

¶ **Sanitary, easily kept clean, staunch enough to withstand Young America's buffets, scuffs, and bangs.**

¶ **Fine for everything but pencil scribbling.**

¶ **Unit sections for any space, clean-cut, upstanding, good-looking, money-saving.**

*There's a difference. We'd like to tell you about it.

Sanymetal Products for Schools are: Toilet, shower, dressing and urinal compartments. Corridor and smoke screens. Metal doors and wainscot. Sanymetal Gravity Hinges. Write for New Catalog No. 15.

The Sanymetal Products Co.
1703 Urbana Road Cleveland, Ohio

TRADE MARK U.S. REG.

Sanymetal *Toilet and Office*
PARTITIONS



THE MIDLAND CHEMICAL LABORATORIES, INC., DUBUQUE, IOWA, WHERE, FOR OVER A QUARTER OF A CENTURY THE HIGHEST QUALITY COMMERCIAL CHEMICALS HAVE BEEN COMPOUNDED.

Midland Quality Products *plus* Midland Service

Through all the years of manufacture of commercial chemicals quality has been the paramount consideration. "Make it a little better" has been our watchword. Later—an organization to administer to the many details and wants of a growing clientele was launched and today there are Midland Men located in all parts of the country ready to present and demonstrate any of our products, on short notice. We are eager to serve you.

Midland Liquid Waxoleum

Wood floors—usually so hard to keep in presentable appearance—can be maintained easily and economically with Midland Liquid Waxoleum. The floor when finished with Liquid Waxoleum is not oily or sticky. Remarkable cleansing qualities are combined with an easy and quick polish.

Midland Mint Aldehyde

This healthful spray destroys unpleasant odors and fills the room with a rich, fragrant, clean odor; its antiseptic action promotes health and comfort. Ideal for the schoolroom.

Midland French Floor Dressing

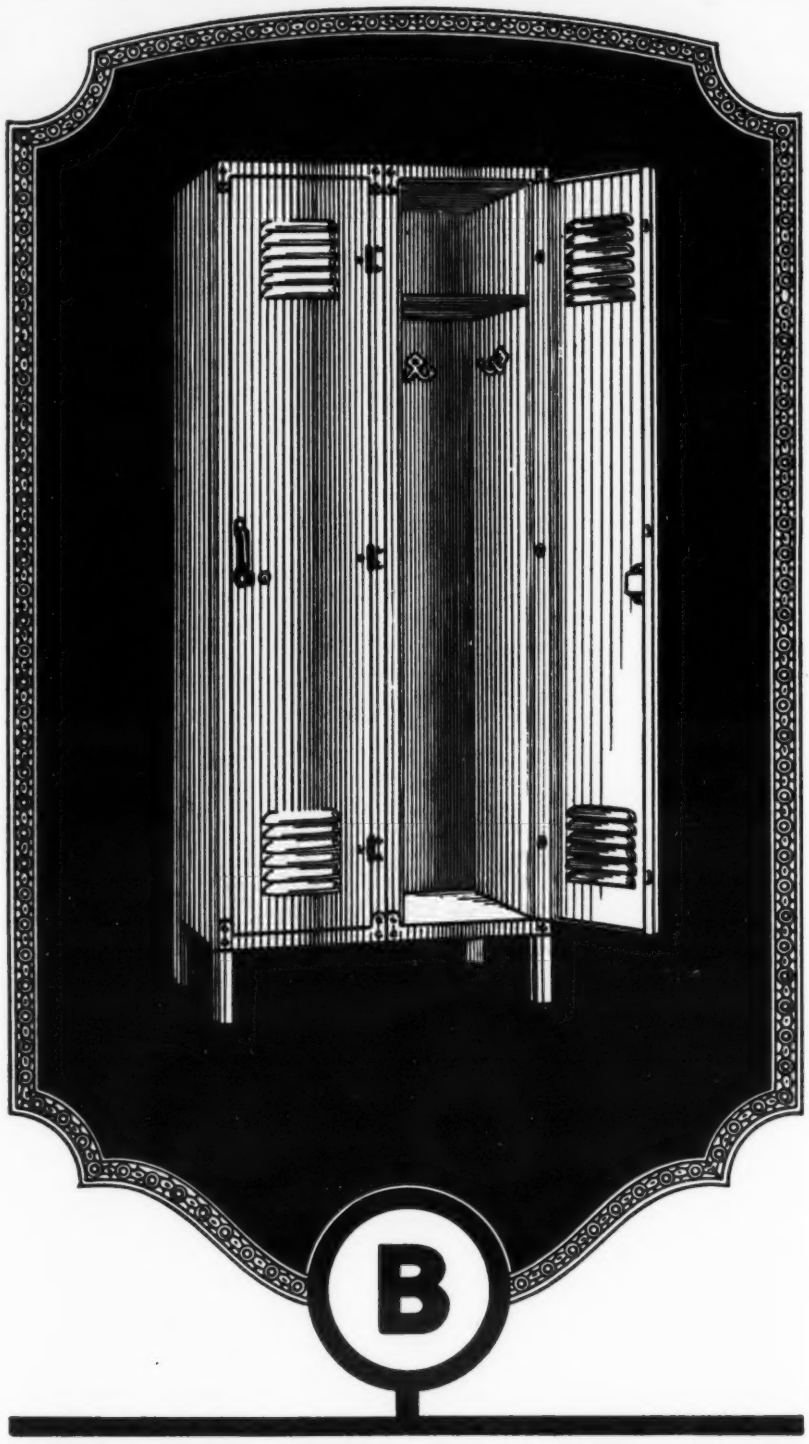
A superior product for the finishing of floors that have just had a hard scrubbing. Midland French Floor Dressing penetrates deeply into the pores of wood exposed and forms a solid coating of protection. Apply Midland French Floor Dressing HOT for best results.

Midland Blackboard Cleaner

Your blackboards are easily kept BLACK with this cleaner. It absolutely removes all the scum or haze that is usually apparent on blackboards. A neutral product that is harmless to composition boards.

Sales representatives are located in all principal cities. An inquiry to the home office will put you in immediate touch with the one nearest you, or order direct from,

MIDLAND CHEMICAL LABORATORIES, Inc.
DUBUQUE, IOWA, U. S. A.



BERLOY

STEEL LOCKERS

Your most difficult locker problem may have a solution right now in the many types of Berloy steel lockers that have been standardized for school use.

Why should you try to fathom the situation—the increased demands made every fall on your equipment—when there is a Berloy Locker Expert as close as your phone. Call him at our expense.

The Berger Mfg. Co., Canton, O.

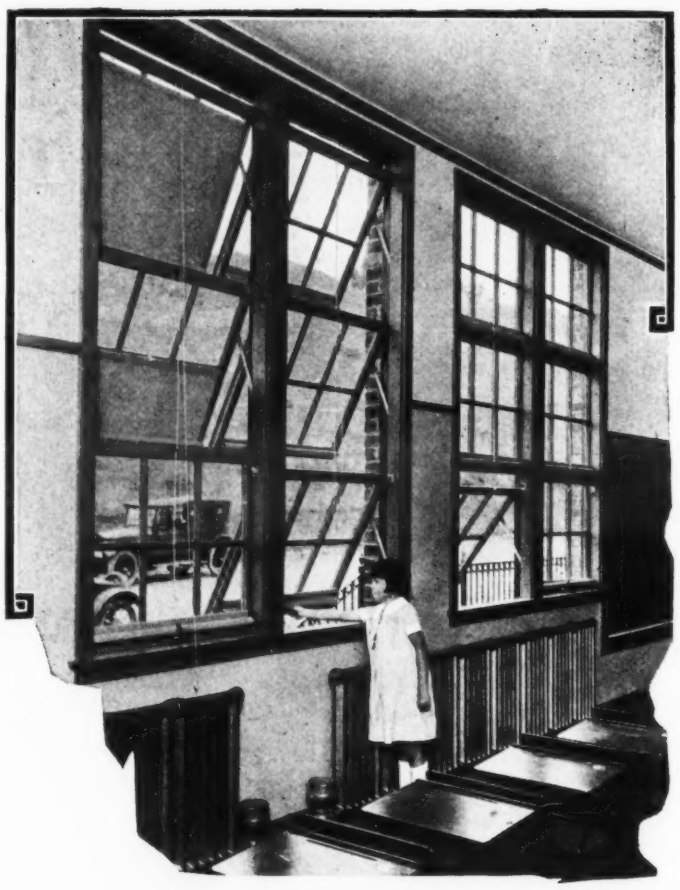
BRANCHES

Philadelphia					Roanoke
Minneapolis	New York	Rochester	Columbus	Des Moines	Dallas
Kansas City	Albany	Long Island City	Pittsburgh	San Antonio	Detroit
Jacksonville	Boston	San Francisco	Milwaukee	St. Louis	Atlanta
Newark, N. J.	Chicago	Los Angeles	Cincinnati	Houston	Seattle



COMPTON UNION HIGH SCHOOL
COMPTON, CALIFORNIA
Rea and Garstang, *Architects*, Los Angeles

Awning Type Windows Excel for Schools



DONOVAN
UNIVERSAL WINDOWS
AWNING TYPE

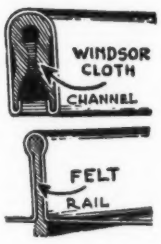
Complete Information Sent on Request

UNIVERSAL WINDOW COMPANY
General Sales Office—1916 Broadway
OAKLAND - CALIFORNIA

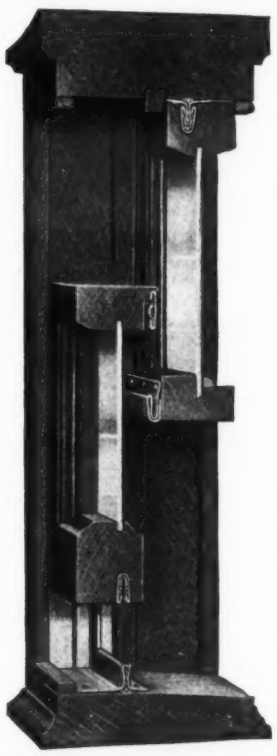
Athey

Cloth Lined Metal Weatherstrip

"Seals" Windows from drafts and dust



Many tests — both in testing laboratories and in actual installations —prove that Athey Cloth Lined Metal Weatherstrip is the one strip which actually *"seals" windows against drafts and dust* without making them hard to open and close.



Notice the cloth to metal contact. This provides a joint through which the air and dust can't filter, yet one resilient enough to permit the windows to be raised and lowered easily.

As proved by installations in some of America's finest buildings —the actual saving in coal, due to the installation of Athey weatherstrip, **pays for the entire installation in a year or two.**

Athey cloth-lined metal weatherstrip is made for either wood or metal windows of every type.

Let us give you some facts and figures proving all this.

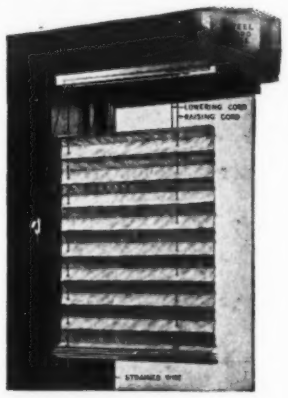
Perennial Window Shades

Provide perfect control of the Sunlight



LUNCHROOM—EQUIPPED WITH ATHEY SHADES.

Athey Shades can be raised from the bottom, or lowered from the top (folding like an accordion). When the sun's rays strike the window they can be partially lowered from the top, permitting sufficient light to enter above them to light the entire room, *yet shielding the occupants from the direct rays of the sun.*



And the cloth of which they are made diffuses a flood of soft, agreeable light even through the portions of the window that are shaded.

They run on strained wires—*so can't rattle and flutter in the wind,* distracting the attention of the pupils.

These distinct advantages plus the fact that their unusually long life **makes them the most economical obtainable,** is making them increasingly popular in the finest schools.

A copy of our Booklet, "Conservation of Eyesight," will be sent on request.

The specially woven Coutil Cloth used is as near indestructible as cloth can be made. And the shades have no latches, catches or springs to slip, stick or break.

Thousands of installations prove their extra years of good-looking life making them the **most economical shades obtainable.**

Athey Products

Perennial Window Shades
Cloth-Lined Metal Weatherstrips
Athey Disappearing Partition
Athey Skylight Shades

SEE OUR CATALOGUE IN SWEETS

Athey Company

6093 WEST 65TH ST., CHICAGO.

New York City: F. H. KEESE, 7 East 42nd St.

In Canada: **CRESSWELL - McINTOSH, Reg'd — 270 Seigneurs St., Montreal, Quebec.**

SCHOOL ARCHITECTS DIRECTORY

J. WILLIAMS BEAL, SONS
ARCHITECTS
185 DEVONSHIRE STREET
BOSTON, MASSACHUSETTS

FRANK H. DEARMENT & CO.
ARCHITECTS
CONSTRUCTION ENGINEERING
EVERETT BUILDING AKRON, OHIO
Member Cleveland Chapter American Institute of Architects

Wm. G. Herbst, A. I. A. E. O. Kuenzli, A. I. A.
HERBST and KUENZLI
ARCHITECTS
Educational and Public Buildings
130 Wisconsin Ave. Milwaukee, Wis.

F. E. BERGER R. L. KELLEY
Architects
Specialists Educational Buildings
LINCOLN BUILDING, CHAMPAIGN, ILL.

H. A. Foeller, A. I. A. M. W. Schober, A. I. A.
FOELLER & SCHOBER
ARCHITECTS
GREEN BAY, WISCONSIN

HERSH & SHOLLAR
Specialists in School Building Design
ALTOONA, PENNA.
Registered Architects in Pennsylvania
Members So. Penna. Chapter American Institute Architects

BONSACK & PEARCE
WILL MAKE SURVEY OF YOUR NEEDS
Complete Architectural & Engineering Services by School Specialists
411 Olive Street St. Louis, Mo.

FRAMPTON & BOWERS
Registered Architects
Fifteen years in planning and constructing School Houses
SIMPLICITY IN ARCHITECTURAL DESIGN
412 11th St. Huntington, W. Va

WILBUR A. HITCHCOCK
ARCHITECT
206 Grand Ave., Laramie, Wyo.
SPECIALIZING IN EDUCATIONAL BUILDINGS

C. O. BOYCE.
ARCHITECT
SCHOOL SPECIALIST
ATLAS BANK BUILDING
CINCINNATI OHIO

MARTIN J. GEISE
Architect
I make a Specialty of Designing School Buildings in Illinois, Iowa and Missouri. Over 20 Years Experience
KEOKUK, IOWA. Y.M.C.A. Building AND QUINCY, ILL. 8th and Main Sts.

HOLMES & FLINN
Architects
Specializing in Educational Buildings
8 S. Dearborn St., Chicago, Ill.

HARRY E. BOYLE & CO.
Architects and School Specialists
Furniture Exchange Building
EVANSVILLE, IND.
Licensed Architects State of Illinois

Bertram E. Giesecke A. Watkins Harris
GIESECKE & HARRIS
Architects
Specializing in School Design
207 West 7th St. Austin, Texas

WARREN HOLMES - POWERS COMPANY
ARCHITECTS AND ENGINEERS
Inventors of the "HOLMES" System of School Planning
Surveys made by our Educational Department
64 W. Randolph St. CHICAGO, ILL.
112 E. Allegan St. LANSING, MICH.

IRWIN T. CATHERINE, A. I. A.
ARCHITECT
School Buildings of Distinction.
FRANKLIN TRUST BUILDING, PHILADELPHIA

HARRY M. GRIFFIN
ARCHITECT
SPECIALIZING IN EDUCATIONAL BUILDINGS
512½ Main St. — Penn - Sta.
DAYTONA BEACH, FLORIDA.

HUTCHINS & FRENCH
Architects
11 Beacon Street, Boston, Mass.

CHILDS & SMITH
Architects
720 North Michigan Avenue
Chicago, Ill.

GUILBERT & BETELLE
Architects
Chamber of Commerce Building
Newark, New Jersey

WM. B. ITTNER, Inc.
Fellow, American Institute of Architects
A Quarter Century in School-house Planning and Construction
Nineteen Years—Architect, Board of Education, St. Louis, Mo.
Superior Architectural and Engineering Service Rendered

COFFIN & COFFIN
ARCHITECTS
522 FIFTH AVENUE
NEW YORK CITY

EDWARD HAHN, Architect
School Architecture A Specialty
OFFICE & STUDIO
Professional Building, Hempstead, N. Y.

LEWIS & DOUGHERTY
Architects
35 North Dearborn St., Chicago, Ill.

FRANK IRVING COOPER CORPORATION
ARCHITECTS ENGINEERS
SPECIALIZING IN SCHOOLHOUSE PLANNING
172 Tremont St., Boston, Massachusetts

HAMILTON FELLOWS AND WILKINSON
ARCHITECTS AND ENGINEERS
814 Tower Court, Chicago
Members of the American Institute of Architects

Joseph C. Llewellyn F.A.I.A. Ralph C. Llewellyn M.W.S.E. and A.I.A.
JOS. C. LLEWELLYN CO.
ARCHITECTS and ENGINEERS
38 S. Dearborn St.
Chicago.

SCHOOL ARCHITECTS DIRECTORY

T. MACLAREN
Member of the American Institute of Architects
ARCHITECT
320-322 Hagerman Bldg., Colorado Springs, Colo.

C. Godfrey Poggi
and
William B. Bragdon
ARCHITECTS
Elizabeth, New Jersey

TOOKER & MARSH
ARCHITECTS
101 Park Ave. New York City, N.Y.

MALCOMSON & HIGGINBOTHAM
Architects
1217 Griswold St., Detroit, Mich.

IRVING K. POND, C. E., F. and Past Pres. A. I. A.
ALLEN B. POND, F. A. I. A.
EDGAR MARTIN, A. I. A. M. Am Soc. C. E.
ALBERT L. LLOYD
POND & POND, MARTIN AND LLOYD
ARCHITECTS
6 North Michigan Avenue, CHICAGO, ILL

CHARLES L. TROUTMAN
Registered Architect & Engineer
School Specialist
410 American Trust Building, Evansville, Ind.

MORRIS W. MALONEY
ARCHITECT
23 Pearl Street
SPRINGFIELD, MASS.

WALTER A. RABOLD, Inc.
ARCHITECTS
Educational Survey and Preliminary Sketches free to Boards of Education.
Superior Planning enhances effective curriculum.
509 Insurance Center Bldg. Cleveland, Ohio
404 Martin Bldg. Canton, Ohio

HENRY H. TURNER
Architect, Institutional Specialist
Michigan Trust Building Grand Rapids, Michigan
Architectural, Engineering Equipment and Consulting Service
Architect Board of Education City of Grand Rapids 1909 to 1920

W. H. McLEAN
ARCHITECT
713 TREMONT TEMPLE, 88 TREMONT ST., BOSTON, MASS.
Specialist in Designing and Planning of School Buildings

ROBERT J. REILEY
ARCHITECT
12 East 41st St. New York, N. Y.

Frank Upman, A. I. A. Percy C. Adams, A. I. A.
UPMAN & ADAMS
REGISTERED ARCHITECTS
Woodward Bldg. Washington, D. C.

KARL D. NORRIS
ARCHITECT
205 Calumet Building Phone 282
EAST CHICAGO -:- INDIANA

A. W. E. SCHOENBERG
ARCHITECT
OLEAN, N. Y.

Van Leyen, Schilling & Keough
Architects and Engineers
3440 Cass Avenue, Detroit, Michigan
Specializing in EDUCATIONAL and Society Buildings
Our Organization Embraces Architects and Specialists in Structural, Heating, Ventilating, Electrical and Power Engineering

PERKINS, CHATTEN & HAMMOND
160 North LaSalle Street Chicago, Illinois
Members of the American Institute of Architects.

JOHN A. SCRIBBINS
ARCHITECT
1163 First National Bank Building, CHICAGO, ILL.
Specializing in Educational Buildings

H. J. VAN RYN, A.I.A. G. J. DE GELLEKE, F.A.I.A.
VAN RYN & DE GELLEKE
ARCHITECTS
FourteenYears-Architect School Board, Milwaukee, Wis.
726 CASWELL BUILDING, MILWAUKEE, WISCONSIN

Edward A. Peterson Gilbert A. Johnson
PETERSON & JOHNSON
Architects Board of Education City of Rockford, Ill.
Sw. American Bank Rockford, Ill.

ERNEST SIBLEY, A. I. A.
ARCHITECT
LAWRENCE C. LICHT, Associate
PALISADE, Studio on the Palisades
NEW JERSEY Opposite New York City

VERNER, WILHELM & MOLBY
R. F. SHREVE, Associate
ARCHITECTS & ENGINEERS
Specializing in Educational Buildings
Book Building Detroit, Mich.

JOHN NOBLE PIERSON & SON
ARCHITECTS & ENGINEERS
Specialists in School House Construction
Over Two-Hundred Schools
198 Jefferson Street, Perth Amboy, N. J.

STARRETT AND VAN VLECK
ARCHITECTS
Equitable Life Building
393 Seventh Avenue, New York, N. Y.

Edw. J. Wood, A. I. A. Carleton C. Wood
EDWARD J. WOOD & SON
Architects
Specialists in School Design
We also furnish Consulting Service to School Boards
Lowndes Building Clarksburg, W. Va.

Philip R. Hooton, A.I.A. Archie N. Schaeffer, A.I.A.
Edwin Roozen Edgar E. Lundeen, A. I. A.
ASSOCIATES OF
A. L. PILLSBURY
ARCHITECT
Specializing in School Buildings. Bloomington, Illinois.

OREN THOMAS
SCHOOL ARCHITECT
508 Old Colony Bldg. DES MOINES, IOWA

J. C. WOOD CO.
ARCHITECTS
Specializing in School Buildings
Licensed in State of Illinois
410 Howes Block CLINTON, IOWA

PERMALIUM

NICKEL PLATED ALUMINUM

Serving Trays



The Permalium Process

— of nickel plating aluminum is not new. It has been thoroughly tested in laboratories and in active service for over five years. Each Permalium Tray carries our absolute guarantee against peeling.

Roll Call of Users Partial List

HOSPITALS

Mercer Hospital, *Trenton, N. J.*
Homeopathic Hospital, *East Orange, N. J.*
Wessen Maternity Hospital, *Springfield, Mass.*
Ideal Hospital of Endicott, *Endicott, N. Y.*
West Suburban Hospital, *Chicago, Ill.*
City Hospital of Akron, *Akron, Ohio*

HOTELS

Rexmere Club Hotel, *Stamford, N. Y.*
Y. M. C. A. Hotel, *Chicago, Ill.*
Edwards Hotel, *Jackson, Miss.*
Hotel Onondaga, *Syracuse, N. Y.*
Edgewater Beach Hotel, *Chicago, Ill.*
Westcott Hotel, *Richmond, Ind.*
Hotel Lenox, *Buffalo, N. Y.*
Bancroft Hotel, *Worcester, Mass.*
Chicago, Milwaukee & St. Paul Ry. Co.
New Bismark Hotel Co., *Chicago, Ill.*
Charlefonte Hotel, *Atlantic City, N. J.*
Arlington Hotel, *Binghamton, N. Y.*

CAFETERIAS AND RESTAURANTS

Crystal Cafeteria, *California*
Delft Lunch Co., *Cleveland, Ohio*
Royal Palm Cafeteria, *Fort Meyers, Fla.*
Apollo Lunch Co., *Portsmouth, N. H.*
Maldaner's, *Springfield, Ill.*
Bickford's Lunch Room, *New York*
Clarke & Co., *Peoria, Ill.*
Le Petit Gourmet, *Chicago, Ill.*
Heller's Cafeteria *California*
Harry L. Magee, *Bloomsburg, Pa.*
Harvey Cafteria, *Toledo, Ohio*
Kugler's Cafeteria, *Philadelphia, Pa.*
Bunn Bros. Cafeteria, *New York*
Skooglund's Cafeteria, *Chicago, Ill.*
Clark Restaurant Co., *Cleveland, Ohio*
Marshall Cafeteria, *Boulder, Colo.*
Fred Harvey Cafeteria, *Chicago, Ill.*
Mc. Crone's Restaurant, *Cincinnati, Ohio*

Perfectly Satisfactory—

After a year of service

PERMALIUM—the only nickel plated aluminum serving tray—is guaranteed not to peel. Laboratory tests of over five years and actual service for over one year have justified this guarantee.

One user of Permalium serving trays writes: "Slightly more than one year ago, we placed 500 of these trays in service and to date have found them perfectly satisfactory in every respect. No indication of peeling has occurred and I can recommend them to anyone as the satisfactory solution to tray troubles."

Permalium serving trays are sanitary because they are easy to clean. You simply wash them with soap and water—do not use steel wool or powder abrasives. Permalium trays won't soil linen—they are always bright, lustrous, and rich looking.

Permalium serving trays are the ideal sanitary tray for the school lunch room. Write today to the *Permalium Products Co., 3806 S. Racine Ave., Chicago, Ill.*, for attractive catalog and prices. Use coupon below.

COUPON—Tear out and mail today!

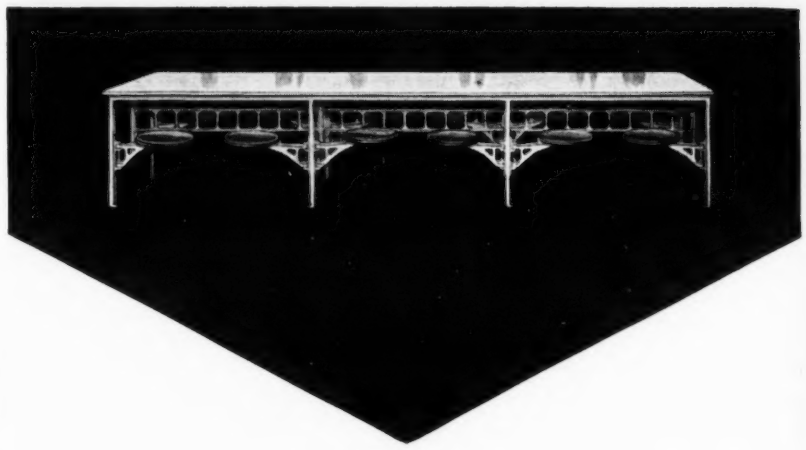
The Permalium Products Co., 3806 S. Racine Ave., Chicago, Ill.

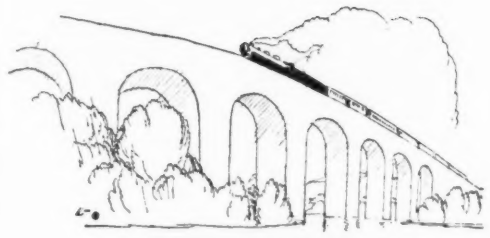
Gentlemen: Without obligation please send me catalog and prices on Permalium Nickel Plated Aluminum Trays. I have noted below style, size, and quantity in which I am interested:

Check Style—

Round ☐; Oval ☐; Rectangular ☐; Length——; Width——; Quantity——

(Please write name, address, city and state in margin below.)





BUILT for wear, no part of a Sani Products installation ever needs replacement. You don't have to pay bills for repairs or refinishing. Before buying, send for our new catalogue of complete restaurant equipment.

SANI PRODUCTS CO.
20 Sani Bldg. · North Chicago, Ill.

Selling organization for Marietta Mfg. Co. and Chicago Hardware Foundry Co.

Sani-Onyx **Sani** Sani-Metal



Every School Needs a "Van" Cafeteria

EVERY school needs a cafeteria. Ergo, every school needs a "Van" Cafeteria—because economy, dependability and lasting endurance are fundamental qualities of "Van" Equipment. Any "Van" user (there are thousands) will tell you why!

Our Engineers will gladly show you how a "Van" Cafeteria will meet your needs. Or, if you require replacements, how to fill these most advantageously. There is no difference in cost. You can judge for yourself the difference in calibre.

NEW ORLEANS
CLEVELAND
ATLANTA

The John Van Range Co.
EQUIPMENT FOR THE PREPARATION AND SERVING OF FOOD
Cincinnati

CHICAGO
LOUISVILLE
DETROIT



Upper view is of the attractive "Van" Cafeteria counter in the Kirby-Smith High School, Jacksonville, Fla.

Left, a view of the dining room and exterior of the Kirby-Smith High School, Jacksonville, Fla. "Van" Cafeteria Equipment, of course.



No. 1000 Two-Class Chemistry and General Science Table. One of 40 different designs for the Chemistry Laboratory.

Yes! Emergency Situations are Met by SHELDON Service

SPECIFY your needs from this complete variety of *in stock* SHELDON Laboratory Furniture which is now ready to ship on short notice. No delayed or wasted classroom hours! No lost ground to students! No disarranged schedules for instructors!

Choose from over 300 Designs.

Our greatly increased production and warehousing facilities right here at the factory allow you to select your furniture from over 300 designs. We anticipated emergency orders and therefore we are prepared to fill them.

Write or wire today for SHELDON Service.

There is no obligation on your part in asking for the services of the Sheldon Sales Representative in your vicinity. Just wire or write and he will be on the job to plan the installation to fit your need.

The SHELDON plan and proposal idea has been helpful to over 13,000 educators and architects.

E. H. SHELDON & COMPANY

Scientific Furniture—Scientifically Built.

MUSKEGON MICHIGAN, U. S. A.

Sheldon Laboratory Furniture

E. H. SHELDON & CO., MUSKEGON, MICH. S.B.J. 9-27

You may send us, free of charge, your new furniture catalog. We are interested in

☐ Chemistry ☐ Physics ☐ Biology ☐ Agriculture ☐ Have Representative Call
☐ General Science ☐ Cooking ☐ Sewing
☐ Manual Training ☐ Drawing ☐ Art ☐ Commercial

Name .....

Address .....

Remarks .....



7001-C 7000-5

We Ask—

Because of the indiscriminate use of the phrase, **correct posture seating,** we ask that educators carefully investigate school equipment offered to them for which the claim of correct seating is made. Knowing the value of correct seating to the growing child, the educator selecting new equipment will be aided by the counsel of a competent surgeon or orthopedist.

Derby school chairs are made under the Earl Thompson Correct Seating patents. The patented construction offers the finest development in correct posture seating.

Educators designed the Derby line of school equipment. Resultantly it well meets school requirements.

Our school specialists are glad to co-operate with educators in consideration of their equipment problems.

P. DERBY & CO. INC.

Chairmakers for 83 years

GARDNER, MASS.

New York City, N. Y. One Park Avenue

Boston, Mass. 197 Friend St.

Go to the Child



for The Proof of



American Seating Superiority



Adjustable Universal
No. 134



Steel Adjustable Box Desk and Chair
No. 114

Where the needs of the child are given *first* consideration, there you will find "American" seating equipment.

Visit any "American" equipped classroom for proof of "American" superiority. There you will find the "seat-protected" child . . . the child who has been provided hygienic advantages. Erect, well developed, strong bodies greet you. Excellence of physical development is the rule . . . *not* the exception. Educational progress is assisted by correct seating.

Behind the universal approval accorded "American" seats by leading school hygiene authorities is a half century of specialization and research in school seating. More than built-in quality . . . than stamina and beauty, the "American" mark on school seats guarantees hygienic perfection. So, where the needs of the child are given *first* consideration, there you will find "American" seating equipment.



Adjustable Universal Tablet Arm Chair



Tubular Steel Model
No. 101

American Seating Company

14 East Jackson Boulevard — Chicago • • Illinois

53 Distributors - The Factory is in Michigan, but the *Service* is *Local* to you

The Standard By Which All Others are Judged



No. 99QO
CORRECT SEATING CHAIR

THE "STANDARD" No. 99 Correct Seating Tablet Arm Chair is universally accepted by orthopedic and school hygiene authorities as being best adapted to give proper support at the lumbar and thoracic curves making erect posture easy, comfortable, and restful. Many leading universities, colleges, and high schools have adopted this chair as their standard chair.

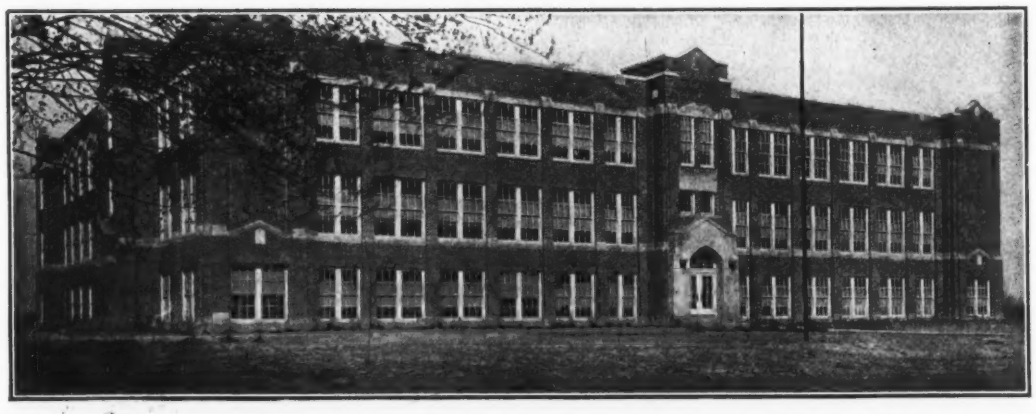
Standard chairs are built to fit the child. Sold by leading School Supply Distributors. Send for our new catalogue showing 70 pages of modern school furniture.

STANDARD SCHOOL EQUIPMENT CO. Inc.

229 W. Breckenridge St. Louisville, Ky.



School Cafeteria equipped with Gunn Lino Tables



Lincoln Consolidated School——Ypsilanti, Mich. Warren Holmes-Powers Company, Architects

GUNN

"LINO" Desks
Trademark Reg.
for Teachers

"LINO" Tables
Trademark Reg.
for Cafeterias
are now used in
many of our
FINEST SCHOOLS

No Breakage of Tops

Quiet and Pleasing

Sample of Top and Full Particulars on Request

THE GUNN FURNITURE CO.
GRAND RAPIDS, MICH.



MOVABLE CHAIR DESK.
Three Adjustments.
Rigid, Non-Vibrating Top.



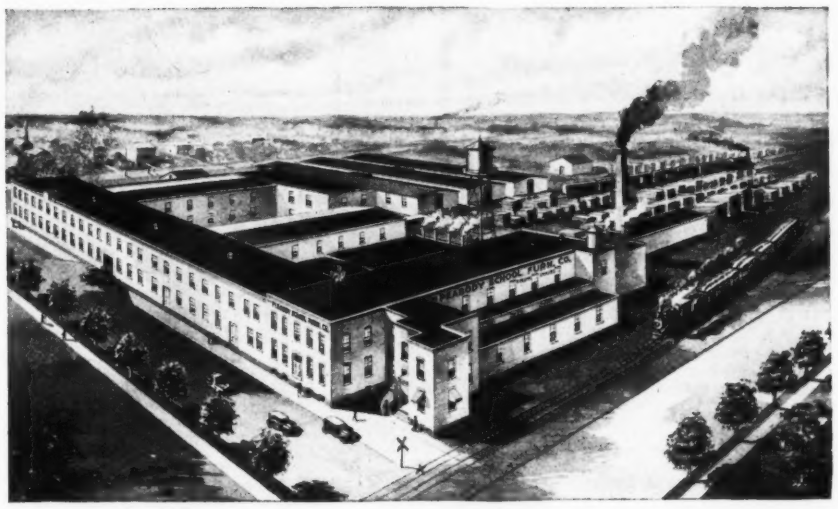
SANITARY SCHOOL DESK.
Noiseless Folding Seat. Semi-Steel Standards.



SANITARY ADJUSTABLE DESK.
Adjustable Seat and Top.
Semi-Steel Standards.



OPERA CHAIR No. 600.





OPERA CHAIR No. 700.

THE HOME OF PEABODY PRODUCTS

School Office and Classroom Furniture

The home of **Peabody Products** is a modern plant, operated by an efficient industrial family. Twenty years' experience in the manufacture of high grade School Furniture. Every article sold with a guarantee to give complete satisfaction in every respect. "Peabody" service will please you.

Write for Catalog and Price List

The Peabody School Furniture Co.

North Manchester, Indiana



FOLDING CHAIR No. 51.
Form Fitting 5-Ply Veneers.
PATENTED JAN. 18, 1910.



TEACHERS' DESKS—SEVEN PATTERNS.
Built with Solid Oak Tops.

PEABODY PRODUCTS SERVE YOU BEST





NON-TIP FOLDING CHAIR No. 70.
Folds as Flat as a Board.
PATENTED NOV. 12, 1918.

SAMSON



No. 321 OAK

TABLES FOR ALL YOUR NEEDS

The manufacturers of Samson School, Office and Library tables are aware of the various requirements that are necessary to properly take care of all uses to which these tables are put in the modern school. Therefore the line has been made so extensive that there is a Samson table for your every need.

Another reason for your specifying Samson is in the fact that all of these tables are built of selected materials, by skilled workmen and modern machinery, and, by the use of the latest principles of construction known today. Legs are taper-miter joint, boxed; tops are heavy five ply, cleated; and finishes are the best to be had.

And besides, all models are carefully studied for proper proportion and beauty. You can rest assured that any Samson table you may buy, whether one of the lowest or the highest priced pieces in the line, it will be balanced as it should be and will add materially to the beauty of the room in which it is placed.

Write for complete information.

MUTSCHLER BROTHERS COMPANY

NAPPANEE **INDIANA**



No. 329 OAK

SAMSON

OFFICE TABLES DIRECTORS TABLES

TRADE MARK REG U.S. PAT. OFF

MUTSCHLER BROTHERS CO. NAPPANEE, IND., U. S. A.

A FOLDING CHAIR UNEQUALLED for DURABILITY and SERVICE in SCHOOLS



The "Viking" has already proved its merit by the wide acceptance it enjoys in the school field. Many school boards have specified its installation in one or two schools and, after the trial, have ordered "Vikings" for all their other schools. This is a sure sign that it offers dependable service.

The Super-construction of the "Viking" and the fact that it is built entirely of 20 gauge steel make it both fireproof and indestructible. It is so proportioned that it will not sway or tip. Squeaking or rattling are unheard of with a "Viking."

Finished in different colors of baked enamel that will not rust, peel, or chip, the "Viking" lends an air of beauty to any room. With its inclined back, it insures perfect comfort, which is not to be found in any other folding chair. All these features combined in the "Viking" give you a very beautiful and serviceable folding chair that will *last forever.*

Write for our illustrated circular.

Maple City Stamping Co.

Peoria, Illinois



Adjustaplex
Model No. 627

ECLIPSE



Combination Desk
Model No. 301

"The Mark of Quality School Furniture"

A modern and complete line of school furniture is offered for your approval and selection. Built into each piece of "Eclipse" furniture are the modern improvements so essential in school equipment. The "Eclipse" line is most complete, a desk and chair for every need. Write for a complete catalogue and description of our entire line.

There are vast differences in school furniture—see "Eclipse," know "Eclipse," buy "Eclipse," and be assured of the best.

The Theodor Kundtz *Co.*

Cleveland Ohio

Imperial DESKS
for every office use
IMPERIAL DESK CO. EVANSVILLE, IND.

Reflect A Sense Of Pride In Your Schools

Whatever schools you happen to visit you will notice that some look neater than others. The teacher with a neat room will be pleased to show you around while the teacher in a poorly kept room will hesitatingly and without enthusiasm display her "work shop." She knows it is not what it should be but she can do nothing to alter the situation. It all depends on you.

Desks lend a great deal of atmosphere to the general appearance of any room. Imperial Desks especially, with their faultless design and beautiful finish, will and have proven a popular selection in the finest schools throughout the country. The in-built construction features are responsible for the long life of Imperial Desks. Their consistent good quality provides a desk that can safely, and with an air of pride, be specified for any room in your school.



No. 410.
54" long, 30" wide, and 30" high.

Leading school supply jobbers throughout the country stock Imperial Desks. Ask for descriptive literature and the name of dealer nearest you.

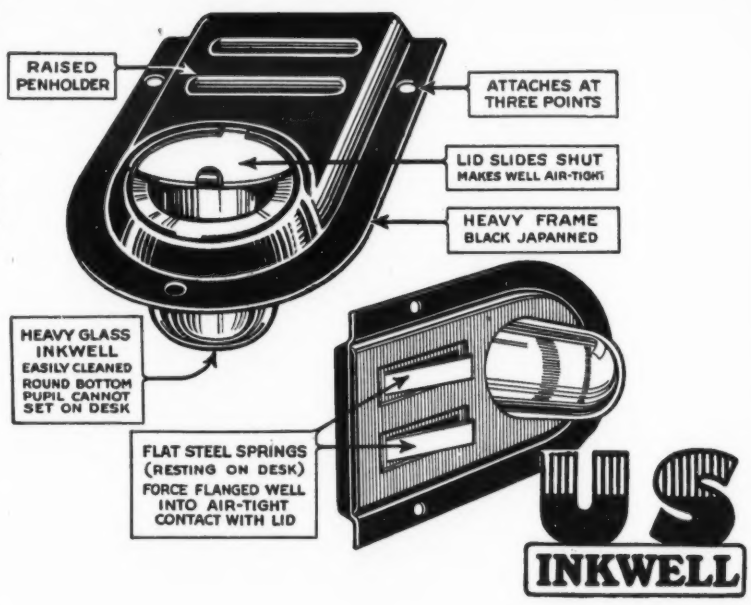
IMPERIAL DESK COMPANY
EVANSVILLE INDIANA

Here is the Replacement Inkwell That Will Fit Your Desks

Any school desk can be quickly equipped with the U. S. Inkwell. Just drive in three desk tacks and the whole job is done. No matter what size holes your desks now have, the U. S. Inkwells will fit them perfectly.

The U. S. Inkwell projects but a very little above the top of the desk. It is neat in appearance and satisfactory in operation. The sliding lid cannot rattle or click. There is no temptation for a pupil to tinker with a U. S. Inkwell.

U. S. Inkwells are cheapest in the end. The tight-fitting lid keeps out dust and prevents evaporation. The glass wells can be quickly removed for cleaning. U. S. Inkwells not only reduce upkeep expenses, but also cost less in the first place. Compare our prices and convince yourself.



Try one gross on our guarantee that US Inkwells *are what you need*

We want every school board and school officials to know the merits of U. S. Inkwells. That is why we are making this offer.

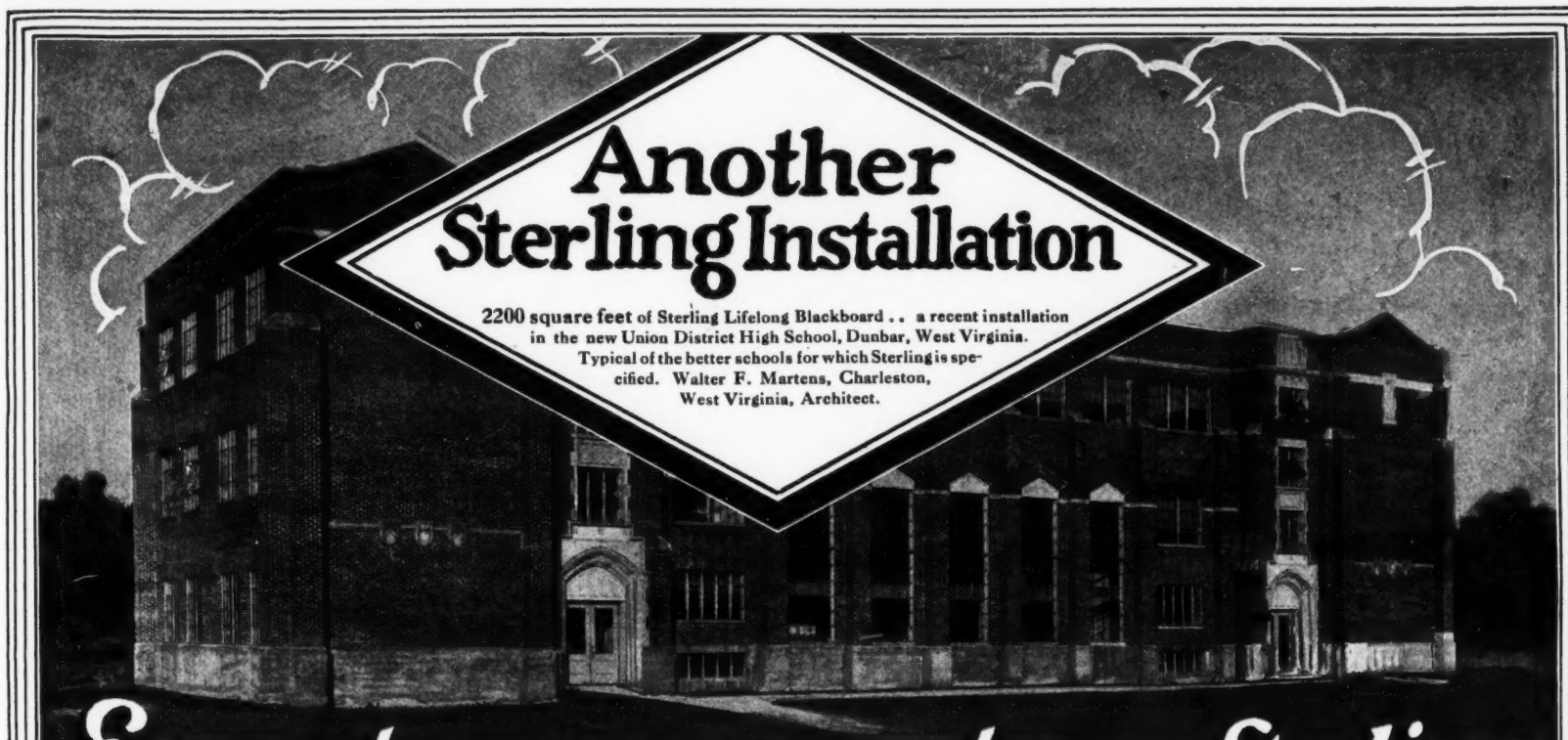
Send us your order for a gross of U. S. Inkwells, either size, Senior, or Junior. Try out some of them on the desks in your school. We know you will find U. S. Inkwells easier to install, better looking and more satisfactory in every way. If for any reason you are not entirely pleased, return the whole gross at our expense. You take no risk whatever.

Send for Free Samples

So that you may see exactly how readily U. S. Inkwells will fit your desk where replacements are necessary, we will send you a sample of our two sizes, Senior and Junior. Fit them onto the desk. Then send us a trial order for one gross of the size that best meets your needs. If you prefer to order through a school supply house, we will send the name of the jobber nearest you.

The US INKWELL

U. S. INKWELL COMPANY
410 S. W. 9th Street Des Moines, Iowa



Every day - more and more Sterling Lifelong Blackboard is installed

A permanent investment that has proved its worth to School Boards everywhere

Guaranteed for the life of the building!

That is the unqualified promise of this 45 year old institution . . . that is the measure of its faith in Sterling Lifelong Blackboard. And Sterling is guaranteed by the distributor who sells it, as well.

Sensational, possibly, to the few. But to those who know the Weber Costello institution and the policies which have dominated it, the amazing achievement of Sterling comes as a logical step in school supply progress.

Today . . . hundreds of thousands of feet of Sterling are serving school needs everywhere. As better schools are being erected . . . as school boards seek to meet their budgets with permanent blackboard investment . . . Sterling is going forward with steady strides.

Black . . . and black all through. A finer writing surface, and a body that seasons and improves with age. Warp and buckle proof . . . strictly fireproof. Little depreciation . . . with its *first* cost practically its *final* cost and easy to install.

Leading architects and contractors specify Sterling. School Boards now know that the reasonable investment Sterling calls for is to all ends a *final* investment. So the *cost* of Sterling really grows less as time goes on. If you don't know all about Sterling Lifelong Blackboard you should get the facts *now*.



Find out for yourself just why Sterling is being installed in the new and better schools everywhere. Send the coupon for a free *sample of Sterling Lifelong Blackboard . . . and detailed information of this time-tested and proved successful product.*

Weber Costello Co.

Chicago Heights — TIME TESTED W.C. SCHOOL SUPPLIES — Illinois

WEBER COSTELLO CO.
Dept. AS9, Chicago Heights, Illinois

Gentlemen: Please send me *Free of all charge* a sample of *Sterling Lifelong Blackboard* together with detailed information about this time-tested and proved successful product. It is understood that this obligates me in no way.

Name.....

Address.....

City..... *State*.....

Position.....

THE WORLD MOVES
DETROIT MOVABLE DESKS
WE LIVE AND LEARN

The Improved "DETROIT CHAIR-DESK" (as illustrated) is highly praised by Authorities on Modern School Equipment.

The entire "DETROIT" line consists of High School Single and Double Unit Tables, Tablet Arm Chairs, Kindergarten Tables and Chairs and is worthy of serious consideration.

Detailed information on the complete line will be furnished on request.



DETROIT SCHOOL EQUIPMENT CO.

General Offices and Factory, Holly, Mich.

A Complete Line of

MOVABLE CHAIR DESKS

— and —

STATIONARY DESKS



ALL WELFARE DESIGNS FULLY COVERED BY PATENTS

LISTEN to the fairy tales of salesmen who are primed in the home office and memorize what they are told to tell you; but when you are ready to buy durable school desks, modern in every respect, ask the salesmen to pack their grips, pay their hotel bill, and leave town—and then make an honest investigation of the desks left on display and compare some of these fairy tales with the actual construction. The Welfare line thrives on such comparison.

Descriptive Circular on Request

WELFARE SEATING COMPANY

1119 Glen Rock Avenue

WAUKEGAN - - - - - ILLINOIS

READSBORO CHAIR COMPANY

READSBORO, VERMONT

"READSBORO" FURNITURE — QUALITY and SATISFACTION

PORTABLE ASSEMBLY SEATING

SINGLE FOLDING CHAIRS

TABLET ARM CHAIRS

KINDERGARTEN FURNITURE



No. 1019



No. 461

SCHOOL DESKS and CHAIRS

SUNDAY SCHOOL FURNITURE

FOLDING TABLES

JUVENILE FURNITURE

SALES ROOMS:

ALBANY, NEW YORK 11 Steuben Street	CINCINNATI, OHIO S. E. Cor. 3rd and Walnut Sts.	HOUSTON, TEX. 1112 Preston Avenue	NEW YORK CITY, N. Y. 1123 Broadway
ATLANTA, GEORGIA 55½ Luckie Street	CLAIRTON, PA. 36 Fourth St., North, Wilson Sta.	KANSAS CITY, MO. 1515 W. Ninth St.	PORTLAND, MAINE Box 742
BALTIMORE, MD. 714 N. Howard St.	CLEVELAND, OHIO 406 Prospect Bldg.	LITTLE ROCK, ARK. New Terminal Warehouse	SAN FRANCISCO, CAL. 601 Mission Street
BOSTON, MASS. 27 Haymarket Square		MINNEAPOLIS, MINN. 36 Fourth St., North,	SYRACUSE, N. Y. 204 East Jefferson St.
CHARLOTTE, N. C. 1900 South Boulevard			TRENTON, N. J. 206 West State Street

Send for bulletins, prices, and full information.



A Revolution in Seating
Has Been Caused by the
Moeser Extended Arm Rest



A Wonderful Finish That Does Not "Scratch"

We have developed a remarkable finish, by which the tannic acid in the wood is brought to the surface, bringing with it the natural color of the wood. The finish is developed within the fibre, consequently it cannot wear off nor rub off.

It has a richer, deeper color and a velvety "feel." It is both "hard" and "elastic"; also transparent. It is very pleasing and will harmonize with any interior finish. Woods treated by this process wear longer and retain their original finished appearance longer.

Ask us about it.

All these advantages with the Moeser Arm:

—Available working surface more than doubled.

—Full support for the back while writing.

—Arm supported while writing, resulting in better penmanship and less fatigue and nervous strain.

—Correct posture, encouraged by this Arm, insures protection from direct and reflected glare on the eyes.

—No necessity to twist body or incur strain on the spine.

A Remarkable Letter from a Well Known Superintendent

W. J. Hamilton, Superintendent of Schools, Oak Park, Ill., wrote:

"The arm rest on the desks is the best thing that we have found to insure erect posture, and the pupils assure us that the seats are more comfortable and more convenient for desk work through the addition of this arm rest. Our Board is placing a large order for further installation of this type desk.

"In Oak Park we have tried out practically all the various makes of school seats and find that there are several excellent models on the market. However, it is the judgment of our building department, our teachers, and interested parents that the National School Equipment seating types meet our requirements the best of any. The workmanship is of the very best, quality of wood and materials is not equalled by any other makes that we now have, while the hygienic physical features are the best of any seating that we have in stock."

You will be interested in our Catalog and Circulars on National School Equipment.

The National School Equipment Co.

Manufacturers of Complete School Equipment

Port Washington, Wis.

NATIONAL School DESKS
"Famous for Comfort"

Stacks Flat for Convenience of Storage



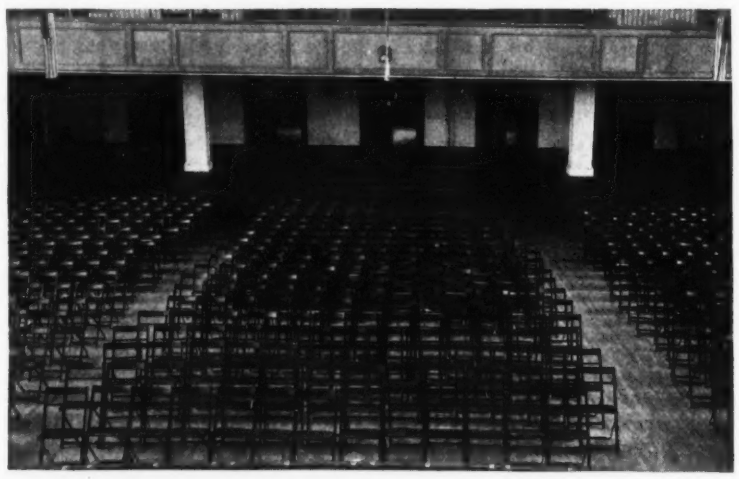
THE compactness with which the Standard Non-Tipping Chair folds represents economy, in that very little floor space is required for storage.

Many advanced features only to be found in the Standard Chair Line developed through our years of exclusive chair manufacturing will add many years of service to your seating problems.

Standard Folding Chairs are made in a variety of styles, write for descriptive catalogue and prices.

Standard Manufacturing Company,
Cambridge City, 1020 S. Foote Street Indiana, U. S. A.

Washington's most modern Schools
Royal Folding Chair equipped



The A. T. STUART JUNIOR HIGH SCHOOL in Washington, D. C., one of the most modern schools in America, has 800 Royal Ideal Folding Chairs in their Assembly Room. Five other schools in Washington have a total of 4000 chairs.

The initial order may have been experimental, but certainly the purchases that followed were the result of **Satisfaction.**



Ideal Folding Chair is durable and comfortable. It stacks compactly and is attractive.

Our Catalog on Request

ROYAL METAL MFG. CO.
Metal Furniture since '97
1130 So. Michigan CHICAGO
Also Manufacturers of
Royal School Furniture, Laboratory Stools, Kindergarten and Lunch Room Furniture

ELGIN SCHOOL TABLE



A portable table, permitting cleaning of floor space. Hygienic, sanitary. Permits greater freedom, increases seating capacity, reduces costs, and follows out the successful new plan of "group instruction."

There is Still Time to Change Over to this Better System



Booklet on "Seating Efficiency" outlines the new "group instruction" plan for greater seating efficiency for first and second grades, a new and better method endorsed by leading educators. Get the facts now. Be prepared to inaugurate this new and better system when school opens again. You have time to make this important improvement if you act at once.

Send for your free copy today.

RINEHIMER BROS. MFG CO. ELGIN, ILL.
DEPT. OF SCHOOL FURNITURE

CRAFTSMANSHIP



Steel Furniture Company school seating has long been noted for its rugged strength, and its splendid record of perfect service wherever used. Enduring all tests of time and strenuous wear every installation of Steel seating is a fine tribute to famous Grand Rapids craftsmanship. Unrivalled in quality and beauty, Steel school seating is the culmination of years of practical experiments and tests.

Built of the finest materials, designed by men who know every school seating requirement, backed by large resources and volume production, Steel seating deserves your earnest consideration. We will gladly send complete details on request.

STEEL FURNITURE CO.

GRAND RAPIDS, MICHIGAN



Made in three sizes
Large
Medium
Small

No. 600, illustrating
Size "A" Desk, Open
Box Style

THE "ARLO"
ADJUSTABLE PEDESTAL DESK

The "Arlo" Adjustable Pedestal Desk is our latest contribution to modern hygienic schoolroom seating. A beautiful desk, both in design and finish, it is absolutely sanitary—exceedingly well adapted to the varying needs of any classroom and guaranteed to withstand the strenuous requirements of every type of classroom service.

The pedestal is made of semi-steel, constructed to give greatest strength at the points of greatest strain. The broad, massive base is cup shaped and when screwed to the floor will never pull loose.

The "Arlo" Adjustable Pedestal Desk will last a lifetime; has steel sides and back and the top is made from maple or birch, finished in Arlo Brown (American Walnut).

Adjustments are simple and easily made. Book box chair seat are independently adjustable. This is a distinctive feature and makes it possible to adjust "Arlo" desks to meet the individual requirements of each pupil.

The "Arlo" Line includes The Arlo Adjustable Pedestal Desk with Study Top, The Arlo Non-Adjustable Pedestal Desk, and the Arlo Pedestal Tablet Arm Chair.

Descriptive literature and prices on request.

Flexibility of adjustments assures each pupil being properly fitted, insuring correct posture and real comfort.

Arlington Seating Company

Office and Factory **Arlington Heights, Ill.**



VUL-COT is solid at sides and bottom—so that even the smallest particles cannot sift through onto the floor. Vul-Cot cannot dent or bend; cannot split or break; will not scratch fine furniture. Three out of five who buy equipment for schools and offices specify Vul-Cot. Guaranteed for five years—many have been in service for thirty. At stationery and school supply houses!

VUL-COT

-the standard waste basket

National Vulcanized Fibre Co., Wilmington, Del., U.S.A. ***Offices in principal cities***

NATIONAL
DUSTLESS CRAYONS

are truly
Crayons of Character



Free of grit from tip to tip NATIONAL CRAYONS respond perfectly to every stroke.

Being uniform in strength, every piece of NATIONAL CRAYON will withstand a firm grip of the fingers without danger of breaking or crumbling.

The dustless feature, combined with uniformity in all other respects, makes NATIONAL the ideal crayon for the classroom.

Your regular school supply dealer can serve you. If not, write direct.



THE NATIONAL CRAYON CO.
West Chester Pa.



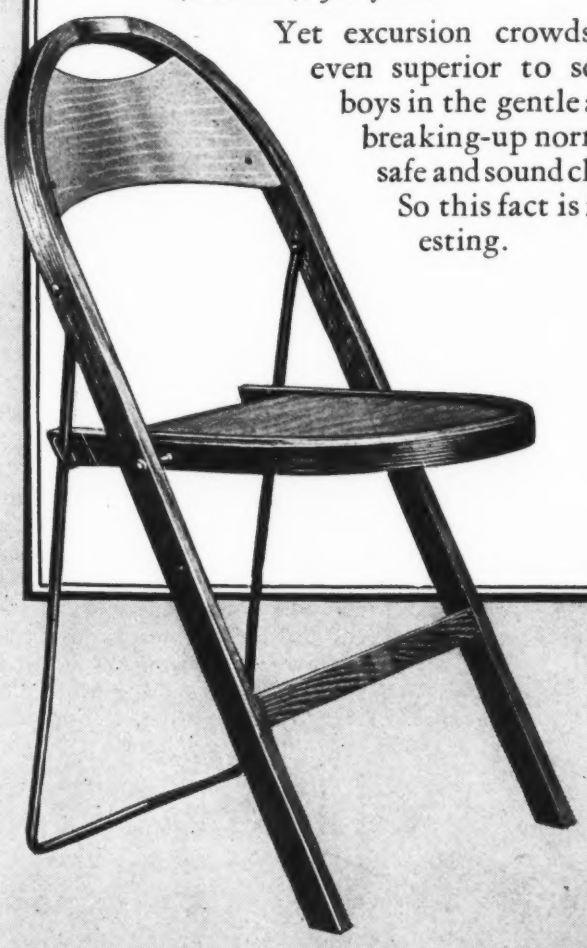
DESIGNED *especially* FOR SCHOOLS...*this new "STAKMORE SPECIAL" folding chair*

New Stakmore Comfort rigidity, long life, low upkeep —*exceptionally low price*

FRILLS cost more than essentials. By removing frills from standard Stakmores, we produce the "Stakmore Special." An exceptionally low priced folding chair, *Perfect For School Use.*

By keeping the essentials of Stakmore quality we keep the famous Stakmore rigidity. Further, the "Special" has only 2 moving parts. Repairs are few. A New York excursion steamship company by using Stakmores cut its repair bills from $800 to $15 a year.

Yet excursion crowds are even superior to school boys in the gentle art of breaking-up normally safe and sound chairs. So this fact is interesting.



In folding chairs comfort is vital. So is silence. Squirming pupils are noisy—and inattentive. By a clever device of re-tilting the back and seat the "Stakmore Special" keeps children comfortable—hence quiet.

By keeping the patented Stakmore design, we keep the famous Stakmore economy of space—for seating and for stacking. There is no cross bar on the rear legs to hinder leg space. You get approximately 12% more seats *comfortably* in a given space. 6 Stakmore "Specials" pack away in a space less than the span of your hand—7½ inches.

As to speed, Stakmores fold like lightning. 1200 were removed from the floor of the Public Service Auditorium in Newark, N. J. *and stored away* in 9 minutes.

Send for sample chair— test its qualities at our risk

SEE for yourself the features of this chair. Send for a sample chair. Try it at our risk. Mention the quantity you wish. The prices are exceptionally low. Just dictate a short note on your official letterhead—*today*. Stakmore Company, Inc., Dept. E-8, 200 Madison Avenue, New York City.

STAKMORE
TRADE MARK
Aristocrats of Folding Furniture

MODERN SCHOOLS NEED MODERN EQUIPMENT

STEEL

FOR STRENGTH PERMANENCE ECONOMY

We are sending this coupon to say that we are interested in your steel equipment and desire your catalog. PIN THIS TO YOUR LETTER HEAD.

EVERY School Board wants to have the most modern equipment available. But such equipment is often more expensive than can be obtained with the funds at hand.

When there is a chance to get the most modern equipment and at the same time SAVE money for the taxpayers, or for the many other needs of the schools, the ambitious School Board will follow its inclinations to make its equipment up-to-date, without hesitation.

The tables, chairs, and stools which the modern school requires for its many purposes, do not always have gentle usage. Even if the janitors have time and inclination to handle them carefully, some of the students will not be so considerate. And frequent repair and replacement bills may occupy too large a place in the school budget.

Angle Steel tables, stools, and chairs will cut down these bills for repair and replacement. And they are made to meet modern needs and according to modern standards. They are becoming more and more popular in modern schools.

It will take you but a moment to clip the coupon at the corner of this ad, pin it to your letter head and start it off to bring you our full illustrated catalog of steel furniture and equipment of great variety. It might help to make your school modern and at the same time save your money for other needs.

ANGLE STEEL STOOL COMPANY

Makers of General Steel Equipment of Every Description

PLAINWELL, MICHIGAN, U. S. A.
Agents in all Principal Cities



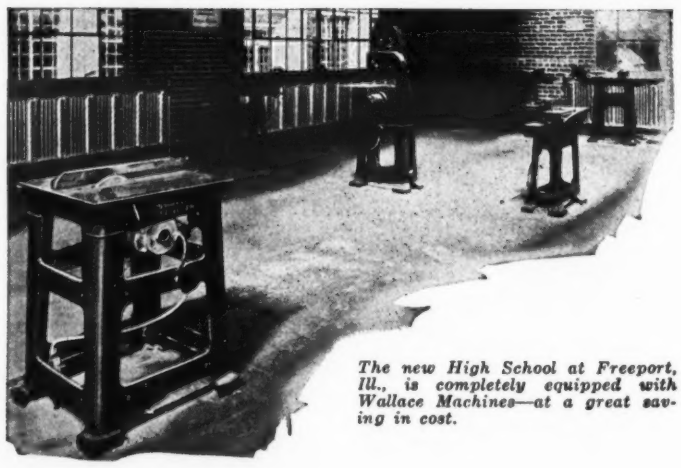
No. 60-2 TABLE

This table is made with smooth, all-steel top and two large all-steel drawers which slide in angle-steel channels.
Each part is riveted to the other and securely braced where strain would occur.
Top is made of 16-gauge sheet steel 60" long by 30" wide.

The two drawers measure 21½" wide, 18" deep, and 3½" high inside. Can be furnished with locks if desired.

The Height is 30" over all. Finish, a rich, dark olive green enamel.

Other tables in our catalog, to meet other needs.



The new High School at Freeport, Ill., is completely equipped with Wallace Machines—at a great saving in cost.

Standard School Equipment
—SAFE FOR BOYS

Thousands of Wallace Portable Beltless Machines are in daily use in the large universities, city and township high schools, grade schools, consolidated, rural and private schools.

Send today for the Wallace Illustrated Catalog and details of the trial offer. Let us put you on our free mailing list to receive the Solar-Wallace Plan Service for Instructors. This includes illustrated job sheets which can be used as regular assignments.

Send today.

J. D. WALLACE & CO.

152 S. California Ave., Chicago, Ill.

MANUAL TRAINING BENCH No. 280



A GLANCE AT THIS NEW PATTERN will show that the combination of various sized drawers and cupboard makes an unusually practical bench. Notice, especially, the small drawer which is intended to hold nails, screws, small tools, etc., which so easily become misplaced when kept with the larger tools. Being able to immediately lay hands on these small but necessary items, will be the means of saving a great deal of time, thereby promoting efficiency. Also, notice the large cupboard, which will hold such tools and materials which can not be kept in the general or three private drawers. Bench is equipped with our Abernathy Rapid Acting Roller Nut Vise No. 70D on front, adjustable stop and dog.

C. CHRISTIANSEN

Manufacturer of this line since 1898

2814-2842 West 26th St., Chicago, Ill.

INVINCIBLE

TRUE TO NAME

Don't Buy Until You Have Obtained Quotations on the INVINCIBLE—The School Desk Supreme



GUARANTEED FOR TWENTY-FIVE YEARS

THE ROWLES LINE EMBODIES EVERY PRACTICAL TYPE OF DESK. IF THE INVINCIBLE IS NOT THE TYPE OF DESK DESIRED SEND FOR OUR COMPLETE FURNITURE CATALOG. WE WILL GLADLY MAIL ON REQUEST.

ECONOMICAL ENDURAROC BLACKBOARD EVERLASTING

ENDURAROC is the ideal blackboard for any type of school building regardless of size, cost or location. It is fire and waterproof. It is uniform in thickness, light in weight, is available in long lengths, easy to handle, and cannot be broken by jars or vibrations. **ENDURAROC** weighs less than one-half as much as slate but is harder and possesses greater tensile strength.

ENDURAROC is from every viewpoint the most economical blackboard—not only in first cost but in installation expense, transportation charges and upkeep.

Write your nearest distributor or direct to factory for samples and further information.

DISTRIBUTED BY

H. S. Crocker Company, Inc., 565 Market Street, San Francisco, Calif.

H. S. Crocker Company, Inc., 923 K Street, Sacramento, Calif.

H. S. Crocker Company, Inc., 723 S. Hill Street, Los Angeles, Calif.

Metropolitan School Supply Co., Muskogee, Okla.

General Seating Co., 1900 South Blvd., Charlotte, N. Car.

D. E. Fryer & Company, 1105 Second Ave., Seattle, Wash.

S. W. Nichols Company, Dallas, Texas.

F. Graham Williams Brick Co., Candler Building, Atlanta, Georgia.

The Geo. A. Draut Company, Amarillo, Tex.

Cress & Co., Inc., 96-98 Front St., Portland, Oregon.

Anderson Currie Co., Saskatoon, Sask., Can. Winnipeg, Man., Can.,

Clark Building Material Co., Jackson, Miss.

Wm. S. Seng, 304 Builders Exchange, San Antonio, Tex.

O. B. Marston Supply Co., 337 W. Washington St., Phoenix, Arizona.

F. W. Richardson, Inc., Billings, Mont.

MANUFACTURED BY

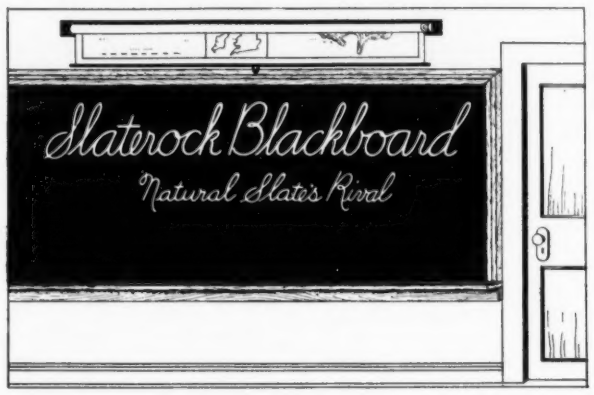
E. W. A. ROWLES CO. 2345 So. LaSalle St. CHICAGO, ILL.

Standards of Excellence in Blackboard Service



A Superior Blackboard

SLATEBESTOS has established a new standard of excellence for blackboard use. It is hard as rock and a slate black color all the way through. The surface is non-reflecting, dense, uniform velvet-smooth, and takes chalk so that it produces a clear white mark, easily discernible from any part of the room. Slatebestos is superior to natural slate in that it is more fire-resisting, costs less, is less subject to breakage, and **it actually improves with age.**



Gives Entire Satisfaction

SLATEROCK is just what its name implies: a rock core with a slate surface. It is a permanent blackboard, the life of which is measured only by the life of the school building itself. Extreme care and exacting supervision in the process of manufacture have made a superior rock into a blackboard that is supreme in every way.



Dependable—Serviceable

SLATOPLATE has proved its worth throughout the many years of satisfactory service it has rendered its many users. Built of the finest wood-pulp, it is specially treated to make it stiffer, harder, stronger, and more dependable than other boards.

Details, free samples, and catalog on request.

Beckley-Cardy Company 17 East 23rd Street Chicago, Ill.

"ALL SCHOOL FURNISHINGS"

SINCE 1893

When in the market for any items of school furniture or supplies we can serve you to your advantage. Don't place your orders until you have seen

OUR NEW CATALOG OF HIGH GRADE SCHOOL FURNITURE AND SUPPLIES

JUST OFF THE PRESS

WRITE FOR YOUR COPY TODAY

YOU CAN ALWAYS GET THE MOST FOR THE LEAST COST

AT

UNION SCHOOL FURNISHING CO.

1028-36 W. VAN BUREN ST.

CHICAGO, ILLINOIS

LIMITED TERRITORY OPEN FOR SALESMEN. WRITE FOR DETAILS.

SQUIRES INKWELLS

Squires No. 59 Boston Inkwell



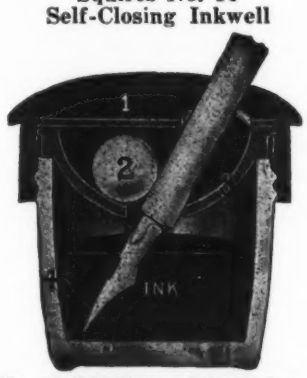
We make the Boston Inkwell with three different styles of tops and three styles of glasses, all interchangeable. They fit a 1-27/32 inch hole.

Squires No. 12 Common Sense Inkwell



Our No. 12 or Common Sense Inkwell is made in three sizes, to fit holes 1½", 1¾" or 1⅞". Corks with Caps or Rubber Corks furnished as desired.

Squires No. 14 Self-Closing Inkwell



No. 14 Self-Closing Inkwell has a Hard Rubber Top and fits a 2 inch hole. It is the best inkwell on the market.

Squires No. 3 or Chicago Inkwell



We furnish a one-lug or a three lug glass for this inkwell which fits a 1-27/32 inch hole. Nickel Plated.

Write for Catalogue, Prices and Samples.

SQUIRES INKWELL COMPANY

508 Second Ave., Pittsburgh, Pa.



FLANAGAN'S

SCHOOL FURNITURE

AND

BLACKBOARDS

"Rock-Plate," a rock base blackboard, and "Perfecto-Plate," a fibre base blackboard, have improved, rich black, durable, velvety surfaces. It will pay you to see these blackboards. Samples will be sent, free, on request.
Quality at low cost—through economical distribution—has been the Flanagan standard for forty-four years. Ask for our complete catalog No. F–70.

A. FLANAGAN COMPANY

920 North Franklin St.

CHICAGO



ABOVE: Worcester Junior High School, Worcester, Mass. J. D. Leland & Company, architects and engineers, Boston, Mass. Richard D. Kimball Co., heating engineers, Boston, Mass.

LEFT: A motor-driven Jennings Vacuum Pump is installed in the return line of the vacuum heating system. Suitable for 65,000 sq. ft. equivalent direct radiation and designed for operation at 35 lbs. pressure.

Here, and in hundreds of other fine schools

In the Worcester Junior High School, as in so many other prominent school buildings, a Jennings Vacuum Heating Pump is relied on for removing the condensation and air from the return line of the steam heating system.

For such service, the Jennings Pump has proved both economical and dependable. Economical — since the air is handled independently of the water—is discharged direct to the atmosphere without back pressure—resulting in a material saving in power.

There is no metal-to-metal contact inside the pump that can cause wear and a consequent decrease in vacuum. High efficiency is maintained. Other than lubrication and packing, no attention is needed.

Bulletins giving sizes and dimensions on request.

THE NASH ENGINEERING COMPANY

11 WILSON ROAD SO. NORWALK, CONN.

Branch Sales Offices: Atlanta, Birmingham, Boston, Buffalo, Chattanooga, Chicago, Cleveland, Dallas, Denver, Detroit, Indianapolis, Kansas City, Memphis, Miami, Minneapolis, New Orleans, New York, Omaha, Philadelphia, Pittsburgh, Portland, Richmond, St. Louis, Salt Lake City, San Francisco, Seattle, Tampa, Washington. **In Canada:** Montreal, Toronto, and Vancouver. **European Offices:** London, England, Norman Engineering Co.; Brussels, Belgium, and Amsterdam, Holland, Louis Reijners & Co.; Oslo, Norway, and Stockholm, Sweden, Lorentzen & Wettre.

Jennings Pumps

RETURN LINE AND AIR LINE VACUUM PUMPS CONDENSATION AND CIRCULATING PUMPS

THE AMERICAN

School Board Journal

A Periodical of School Administration

FRANK BRUCE, *Publisher*
JOHN J. KRILL, *Business Manager*
FRANK O. DUNNING, JR., *Eastern Manager*

Published on the first day of the month by
THE BRUCE PUBLISHING COMPANY
354 Milwaukee St., Milwaukee, Wis.

Eastern Advertising Office:
50 Church St.,
New York, N. Y.

Volume 75 | September, 1927 | No. 3

Cover—Pestalozzi and the Children

Cartoon: The Teacher Who "Jumps Over" Her Superiors..... 39
Harold Heaton

What Types of Students Enter Teaching?..... 40
William H. Batson

Plan of Appointing Teachers in St. Louis..... 40

"More Efficient Administrative School Machinery..... 41
E. S. Richardson

Beware of Too Much Theory..... 43

A Study in Special Supervision..... 44
E. W. Tiegs

Legal Aspects of Residence for School Purposes..... 45
C. C. Liebler

School Consolidation in Indiana..... 47
Roy R. Roudebush

A Simple System of Budget Control..... 48
Arthur J. Peel

As Is the Principal..... 49
R. C. Clark

High-School Office Administration..... 50
G. L. Harris

Principles Governing Management and Accounting for the School Plant..... 51
Fred Engelhardt

To What Extent Shall School Boards Listen to Popular Clamor?..... 52
F. Y. Harper

School Accounting in 115 Cities Under 25,000 Population..... 53
S. O. Rorem

Burning Questions of the School Board..... 56
C. C. Hermann

A Superintendent's Official Letters..... 56

The Madison Elementary School at Santa Monica, Calif..... 57

The East High School at Youngstown, Ohio..... 59

The Eastwood and Montrose Elementary Schools, Houston, Texas..... 62
Harry D. Payne

School Bonds and Bonding Methods..... 65
C. R. Tupper

Ten Fundamentals of Unit Ventilation and Their Application..... 70
A. J. Nesbitt

Rosenwald Schools—1926-1927.....120

EDITORIALS:

School-Board Service and Public Appreciation..... 68

Teacher Tariff-Walls to Protect Home Talent..... 68

An Organized Majority in School-Board Deliberation..... 68

Old and New Methods of Textbook Adoptions..... 69

Once More the Problem of a Teacher Surplus..... 69

School Law..... 76
School Administration Notes..... 84
School Finance and Taxation..... 92
Building News of the Schools.....104
Chicago Correspondence.....110
Future of School Government.....114
Teachers' Salaries.....117
Personal News of School Officials.....122
Teachers and Administration.....128
Washington Correspondence.....132
A. C. Monahan
Personal News of Superintendents....137
School Hygiene.....140
News of the School Boards.....142
Important School-Bond Sales of the Past Month.....158
Book Reviews.....161
After the Meeting.....190
Buyers' News.....190

Something About Magazines

ACCORDING to Ayer's Newspaper Annual, 1927 edition, the births in the periodical field, namely the new publications, such as magazines and newspapers, were 952 last year, while the mortality during the same year was 942. The comment is made that this statement affords an interesting sidelight on the great number of changes in a year, although the total number of publications varied by only ten titles.

It does indeed! It tells that nearly one thousand new publication enterprises were launched in one year. Somebody saw an opportunity to embark into the publishing business, which always looks easy, and in which some phenomenal successes have been achieved. But, the experience has been that where one is a success, many are not.

We cannot speak for the newspapers, but so far as the magazine business is concerned we know that certain factors must be reckoned with. There must be a field for the publication — namely, an interest to be served, where knowledge and information is welcomed, or a cause to be championed.

And yet behind it all there must be the necessary capital to set a publication afloat, and keep it afloat until the coveted recognition has come. There must be experience, energy, and industry, and above all an unselfish spirit to serve rather than to squeeze money out of the enterprise.

THE AMERICAN SCHOOL BOARD JOURNAL, which began publication in 1891, set for itself an ideal rather than a financial goal. That ideal called for service which stood far above the dollar mark. Such service meant more commodious schoolhouses, abler administration, high teaching ability—in brief, better schools in America.

Such an ideal was bound to find support in the United States and if THE AMERICAN SCHOOL BOARD JOURNAL is receiving the recognition of the school public of a great country, it is because it has held consistently and steadfastly to that ideal. Its success, as a monthly magazine, is due to the fact that it has at all times striven to serve the cause of popular education. That is the secret of its success.

WILLIAM GEORGE BRUCE,
Editor.

Copyright, 1927, by the Bruce Publishing Company. All rights reserved. Title registered as Trade Mark in the United States Patent Office. Entered as Second Class Mail Matter in the Post Office at Milwaukee under Act of Congress of March 3, 1879.

Subscriptions—In the United States and possessions, $3.00 per year. In Canada $3.50. In foreign countries $4.00. Single copies, not more than three months old, 35 cents; more than three months old, 50 cents. Sample copies, 35 cents. No orders accepted for volumes dating back more than five years. Back copies more than one year old, not available.

Discontinuance—Notice of discontinuance of subscriptions must reach the Publication office in Milwaukee, at least fifteen days before date of expiration. Notice of changes of address should invariably include the old as well as the new address. Complaints of non-receipt of subscribers' copies cannot be honored unless made within fifteen days after date of issue.

Editorial Material—Manuscripts and photographs bearing on school administration, superintendence, school architecture, and related topics are solicited, and will be paid for upon publication. Contributions should be mailed to Milwaukee direct, and should be accompanied by stamps for return, if unavailable. Open letters to the editor must in all cases contain the name and address of the writer, not necessarily for publication, but as evidence of good faith.

Standard Runs the Schools



Hawthorne School
Minneapolis

Tuttle School
Minneapolis

Patrick Henry School
Minneapolis

SOME TYPICAL MINNEAPOLIS SCHOOLS
Equipped with Standard Electric Time

26 Schools of Minneapolis are now equipped with Standard Electric Time Systems.

Wherever care is exercised in the selection of school equipment "Standard" is usually a first choice because school officials know they can rely on it.

Standard Electric Time Equipment is sold, manufactured, and installed under a system which ensures satisfaction.

"Standard" furnishes a complete system comprising Electric Time, Program Bell, Fire Alarm, and Telephone equipment.

Equip your next school with "Standard" and make sure!

Specifications or estimates gladly furnished—Write home office or nearest branch.

THE STANDARD ELECTRIC TIME COMPANY

89 Logan Street

SPRINGFIELD, MASSACHUSETTS.

BRANCHES

1428 Munsey Bldg.,	Baltimore	717 Mercantile Bank Bldg.,	Dallas	50 Church St.,	New York City
625 S. 18th St.,	Birmingham	562 Penn St.,	Denver	1725 Sansom St.,	Philadelphia
10 High St.,	Boston	Mutual Building,	Kansas City, Mo.	229 Pine St.,	Portland, Ore.
901 Mutual Life Bldg.,	Buffalo	1244 Innes Ave.,	Los Angeles	690 Market St.,	San Francisco
217 Latta Arcade,	Charlotte	745 McKnight Bldg.,	Minneapolis	148 Adams Ave.,	Scranton
1510 Monadnock Bldg.,	Chicago	726 St. Felix St.,	Montreal, Can.	918 Western Ave.,	Seattle, Wash.
83 South High St.,	Columbus			S-110 Cedar St.,	Spokane, Wash.

"Makes Every Minute Count"

THE AMERICAN

School Board Journal

Founded March, 1891, by WILLIAM GEORGE BRUCE

Volume LXXV, No. 3 SEPTEMBER, 1927 Subscription, $3.00 the Year



The Teacher Who "Jumps Over" Her Superiors

What Types of Students Enter Teaching?

William H. Batson, University of South Dakota, and Clarence L. Shedd, Joliet Township High School

In some states and especially in some institutions of higher learning there is a pronounced feeling that the teaching profession does not attract the more intellectual students, and does not interest the students who possess real leadership qualities. It is often assumed that the prestige of the older professions, such as law, medicine, and engineering, is so great and their selective power so strong that only the lower-grade or mediocre students are left to pursue other lines of work.

The Problem

In order to test whether this assumption is true insofar as it applies to the students at the University of South Dakota, the writers made a comparison of students especially interested in teaching with those not interested in teaching, both as to scholastic standing on the basis of average grades and as to leadership qualities.

The manner of determining whether a student was interested in teaching was to examine his scholastic record. If it was found that he had the necessary number of hours' credit in education — twelve semester hours — it was assumed that he expected to obtain a teacher's certificate and possibly teach. On this basis four groups of students were selected, as follows: (1) men who had taken education; (2) men who had not taken education; (3) women who had taken education; (4) women who had not taken education. The sampling included about two hundred students and covered a period of six years from 1921 to 1926.

Group Comparison of Scholarship

The scholarship comparisons were based upon the grades earned. The grading system at the University of South Dakota consists of a five-letter scale of passing grades with numerical medians as follows: *A*, 97; *A-*, 90.5; *B*, 84.5; *B-*, 78.5; and *C*, 72.5. The grades for individuals were properly weighted and the averages were calculated to show comparisons for the four groups as to general average, averages in French and Spanish, averages in philosophy, and averages in chemistry. The results of these comparisons are shown in Table 1.

TABLE 1

Scholastic Averages: General; English; French and Spanish; and Chemistry for Four Groups of People

	Men with Education	Men without Education	Women with Education	Women without Education
General A Average ...	84.7	81.7	84.7	84.4
English	84.0	84.5	85.9	84.5
French and Spanish ...	80.7	80.5	84.1	84.1
Philosophy .	82.0	78.8	85.6	85.0
Chemistry ..	83.8	82.6	84.0	83.6

An examination of the data in Table 1 shows that both the boys and the girls of the teaching groups equal or excel the boys and the girls of the nonteaching groups, in all five fields of comparison with the single exception of the boys in the English groups.

Since the sample groups include those students who will later take up work in the older professions, the averages indicate that education as a profession is attracting, at least, average students from a scholastic standpoint.

Group Comparison as to Extracurricular Activities

In order to determine the leadership qualities of the prospective teachers and to compare these qualities with those of the nonteaching groups, the activities of the different groups of students were discovered by an examination of the University yearbooks covering the period of time covered by the scholarship study. Table 2 lists the various activities and the percentages of each group which took part in each.

From the data obtained the following conclusions would seem to be justified so far as the students at the University of South Dakota are concerned:

TABLE 2

Extracurricular Activities of Four Groups of Students

	Men with Education Per Cent	Men without Education Per Cent	Women with Education Per Cent	Women without Education Per Cent
Official Positions .	34.61	10.80	6.12	5.54
Volante Editor	7.68	1.35	10.20	5.54
Coyote Editor	0.00	0.00	6.12	0.00
Rifle Team..	15.36	1.35	0.00	5.54
Debate	7.68	2.70	0.00	0.00
Dramatics ..	7.68	10.80	2.04	8.31
Publications.	7.68	6.75	0.00	0.00
Band	7.68	2.70	0.00	0.00
Orchestra ...	0.00	1.35	2.04	2.77
Athletics ...	15.36	22.87	22.44	8.31
Societies and Clubs	73.07	35.12	73.47	52.77
Fraternities or Sororities..	73.07	43.23	49.00	41.66
Honorary ..	19.20	5.40	8.16	5.54
Average per cent Engaged in activities	20.69	11.14	13.81	10.46

1. In general, the students who plan to teach stand slightly higher in scholarship than those who do not intend to teach. While the study presents no evidence to explain this, it may be suggested that those who plan to teach have a definite objective and this may influence their work sufficiently to account for some of the difference in scholarship.

2. If the number of activities in which students engage can be taken as an evidence of leadership, then the students planning to teach possess greater leadership qualities than those who are not planning to teach. Further, the number of students of education who belong to social organizations would seem to indicate that the students who are preparing to teach possess a higher degree of social adaptability than students in general.

The writers make no attempt to claim general validity for the two conclusions stated above. It is quite possible that a similar study conducted in another state might yield results quite different from those presented here. Nevertheless, it is clear that so far as South Dakota is concerned, the teaching profession is attracting the best types of students.

Plan of Appointing Teachers in St. Louis

A new plan of selecting teachers for the school system of Saint Louis, Missouri, has been adopted by the board of education of that city. It was prepared by Superintendent John J. Maddox who believed that the time had arrived when a plan of teacher selection should be inaugurated which would recognize all the essentials and the equities involved so completely as to challenge criticism.

Superintendent Maddox, in presenting his plan, explains that the effort to formulate an acceptable plan had its beginning in 1897, when the board of education provided "that all appointments shall be made *only* upon the recommendation of the superintendent of instruction and the approval of the board; second, that all appointments shall be made upon the basis of *merit* to be ascertained, as far as practicable, by examination; and third, that examinations for appointment shall be conducted by the superintendent of instruction, under regulations made by the board of education."

In keeping with this provision the board of education adopted regulations governing the examination of teachers. These provided the following: "First, all examinations of applicants for positions of principals and teachers shall be made by the superintendent of instruction or under his direction. Second, a record thereof shall be kept for the inspection of the Board. Third, the superintendent of instruction, the assistant superintendents, the principals of high schools, and such supervisors, principals, and teachers as the superintendent may select shall constitute the board of examiners. The superintendent may appoint special committees for the examination of teachers of special branches. Fourth, the superintendent shall be authorized to prescribe the *mode and the subject* of the examination."

"This rule of the board places the entire responsibility for conducting examinations upon the superintendent of instruction," Superintendent Maddox explains. "This regulation of the board of education makes it a duty of the superintendent not only to determine the subjects and topics upon which applicants are to be examined, but, in addition, to prescribe the *mode* or manner of the examination. It is in keeping with this rule of the board itself that the superintendent has inaugurated the present system of examinations." Mr. Maddox then explains the manner of filing applications and making the examinations, as follows:

The Filing of an Application

"The names of the graduates of the Harris and Summer Teachers' Colleges are placed on a list according to their class rank. From this list all teachers for the elementary schools are selected. The girls are called into service in strict accord with this list, the highest ranking graduate being called first. I am not in complete sympathy with this practice, but am raising no question about it at this time. It is a custom of many years; it is the recommendation of a former superintendent, and bears the approval of this board of education. But for all other positions to be filled, the applicant must submit an application using the blank form prescribed for this purpose. This form, when properly filled out, reveals to the superintendent and his board of examiners such information as the age of the applicant, his experience in teaching, and his educational preparation. Every applicant for a position, even though it be one of our own teachers seeking a new appointment in a position higher than the one he now holds, is told that he will be given no consideration whatever until the proper blank is filled out and placed on file in the office of the superintendent of instruction.

The Physical Examination

"Before the appointment of any person or the serious consideration of such person for appointment a physical examination is required. This examination is made by a physician of the Division of Hygiene of the board of education. Applicants found to be defective in vision, hearing, or other bodily function to an extent which may interfere with the efficient performance of duties will not receive further consideration.

Analysis of the Application

"The next step in the process is the analysis of the application with reference to five points which we regard as of vital importance in the formulation of a judgment relative to any applicant's fitness to teach. First, no restriction whatever is placed on the oral examiner. He considers everything not scored in the preliminary rating—the applicant's record as a teacher, the character of his work in college, his presence, his address, his speech, his personal appearance together with the estimate placed upon him by those who have seen him teach. The oral examiner marks each candidate as 'Outstanding' in ability and fitness, as 'Qualified but not Outstanding,' or as 'Doubtful.' He signs his statement and it becomes a

(Concluded on Page 147)

"More Efficient Administrative School Machinery"[1]

E. S. Richardson, Superintendent of Webster Parish, Minden, La.

School superintendents and school boards are connected with and helping direct the biggest single business in the nation today; biggest from the standpoint of both responsibility and money expended. The entire business of education is the biggest business in the world, save that of our Federal Government. It exceeds the General Motors Company which recently surpassed the steel mammoth in net profits. The business of education is even greater than the Standard Oil Company with its tremendous ramifications and departments. It is a business with billions of invested capital, and annual expenditure of millions, earnings that cannot be computed, with more than one hundred million stockholders, and a great army of workers of which we are a part. And yet, it is a business that never sells a dollar's worth of its product, that never shows either gross or net profits, and never pays a dividend in cash on its stock. It is a business that is admittedly not yet thoroughly organized, and inefficient in many respects, but is a business that will never fail. Public-school education is the greatest single contribution made by the American Republic to civilization. We are its originators and leading practitioners.

There are no businesses in the United States that are conducted on such a huge scale and expend such large sums of money as do our public schools. No business spends its money with as little effort toward true economy. We, who are styled educators, need to be more concerned with how we spend public-tax monies and with results obtained from them.

The country's ever increasing universal demand for more economical school administration and at the same time the public's cry for better schools and longer terms in the rural districts of the nation make my subject, viz., "More Efficient Administrative School Machinery," a very vital topic and will continue to press school officials for solution until the highest possible degree of efficiency is reached both in the country and in the towns. The ultimate end being "equal educational opportunities for all the children at equal minimum cost."

Twenty-five years ago there was practically no demand by any county or state in this Union for the organization of efficient administrative school machinery, nor was there any demand for consolidated schools; but, in order to meet the present-day demand in education it is absolutely necessary that a modern twentieth-century county-unit system of school administration be inaugurated in every county of every state in the nation. Twenty-five years ago there were many good physical reasons for the operation of small schools and the establishing of small local governmental units, namely, few improved highways, few railroads, no automobiles, and no rural mail service, all of which made it physically impossible to operate successfully a county-unit system of school machinery.

Machinery Has Outlived Value

I am of the opinion that our old school machinery installed years ago, which is still in vogue in a number of states, has not kept pace with other lines of human endeavor. This old machinery has served well its purpose in days gone by; but we find it entirely inadequate to meet present-day problems.

The time has arrived in the history of our educational development when we shall be forced either to install entirely new machinery or overhaul the old. I am afraid some of the states have waited too long already to get the



full trade-in value on the old machines. Some of them were made fifty years ago. To some, this step would seem radical, but I believe it absolutely necessary in order to take care of the multiplied needs of our present complex civilization. It is the responsibility of leaders in educational thought to set aside petty prejudices, local politics, and jealousies and assist the lawmakers in drafting such legislation as will permit them to organize in every county of every state a system of efficient school machinery that will measure up on the matter of efficiency and become commensurate in every way with our modern successful commercial organizations of the present day.

In America the commercial world, during the past half century, by wise and efficient application of proper administrative machinery, consolidation, and adequate supervision has built commercial enterprises which are internationally known. Small manufacturing plants located in different parts of the country have been consolidated. Small companies owning short-line railroads have united under a few great systems that are handled by small boards of directors and competent superintendents. Mercantile establishments located and operated by different heads over the country have been consolidated and transformed into large chain and department stores, thereby giving the customers better goods at less money. Our highway systems have been placed in the hands of the states and nation. Rivers, mountains, and deserts have been crossed. Barren wastes have been traversed by modern highways where there was little available tax money to support the construction.

Business Uses Good Administrative Machinery

During the past 25 years the business world has been endeavoring to install adequate administrative machinery. They have emphasized scientific research, expert supervision, centralization, and consolidation. Why should not some of these modern methods of organization be applied scientifically to our ever-growing public-school system which touches so vitally every taxpayer and every boy and girl in the whole country? Can we expect to get the best results educationally for the people's money when we continue to operate this tremendously big business of schools of the present day on the same antiquated system of 25 years ago? Can we expect to consolidate, organize, and supervise our schools properly, having for the unit of administration and taxation so small an area as a township or a district? Certainly we cannot expect to have many laymen living in every small rural township or district who are capable of judging intelligently the ability of the teacher or passing on the financial need or efficiency of the school. Nor do we find in many cases enough taxable wealth in the rural township or district to take care of the educables in that district.

In spite of our antiquated administrative school machinery and financial discrepancies and inequalities, the public schools of the nation as a whole have made remarkable progress. Today they justly enjoy the confidence and approval of the taxpaying public. The real truth is, our schools have outgrown their swaddling clothes. Our original timeworn methods of administration and financing have grown inadequate, crude, and unjust. They should, and must, be changed wholly or revised to meet growing public demands.

Education of local children at local expense is universally endorsed as is evidenced by the fact of the very high millage that has been voted and revoted throughout the country. As the years go by, communities differ more widely in their ability to support their schools. The richer districts are rapidly growing richer and the poorer districts poorer. In some cases one district has many times as much wealth per child as a neighboring district. I shall illustrate my point by reciting a typical chamber-of-commerce advertisement used at meetings held in the country schools of a certain county during a "good-will tour" through the adjacent farming sections of the county.

A City's Boast

The city referred to is situated in the heart of Blank county in a far-away state surrounded by fertile farm lands. The advertisement read about as follows: "We have a superior school system in charge of a trained and progressive city superintendent whose reputation is statewide. He is furnished with all office and supervisory assistance needed. He is a college graduate and is paid a salary of $5,000 per year and expenses. Our faculty is composed of college graduates, all having experience and each a specialist in his line. We have one of the finest high-school buildings in the state, unilaterally lighted, steam heated, equipped with the latest adjustable steel desks with steel lockers for each pupil. In fact, all of the buildings, including teachers' home, are equipped with sanitary toilets, hot and cold water throughout. Our swimming pool is absolutely sanitary in every respect. The excellent deep-water well just completed enables us to change the water daily. Our new gymnasium is one of the finest in the country. Our gymnasium director is the highest-salaried director in the state. The health of our children is looked after by special school physicians and nurses. Our cafeteria is modern in every respect. Our library contains 6,000 volumes, not including the daily newspapers and magazines. Our board of education is composed of six of the most progressive men in this part of the state. In fact, nothing has been left out of our educational program, yet our rate of millage for schools is very low. We are glad to inform the farmers living outside of the city that our board of education will admit a limited number of their children to our school with a charge of only $10 each per month, plus cost of transportation."

A Rural System in Contrast

The "good-will" party from Blank city, fostered and directed by the secretary of the chamber of commerce, armed with its fine statements about their city-school system, started on their annual journey to visit all the rural schools in the county, which were about 42 in number. These country schools were located about the center of townships ranging from three to seven miles apart. Each school in the county was manipulated and managed entirely by three trustees who had been given by the state laws entire control over the schools, even to the electing or the dismissing of the teachers. This system made, of course, each of the 42 individual townships or districts a small distinct school system unto itself.

The first of the 42 schools visited was Enterprise, a two-room school located on a good high-

[1] A paper read at a conference of schoolmen at A. & M. College, College Station, Texas, July, 1927.

way only three and one-half miles from the city limits. The building was situated about the center of a one-half acre block of good farm land, lacking shade trees and flowers. Evidently no attempt at beautifying or landscaping the site had been made. No school architect had been consulted when the building was constructed, for the light came in from the wrong side. Several panes of glass had been broken out of the windows and had not been replaced. A shallow well on the lower side of the lot was the source of the only water supply. On the right side to the back of the premises the girls were provided with an open toilet, but the boys had none.

The paint on the building was badly faded. Hogs in the neighborhood bedded under the front steps as was evidenced by the fleas. On entering the house we noticed a movable wooden partition between the classrooms, indicating that it was used for both classroom work and auditorium purposes. A dilapidated unjacketed stove with crooked pipes was the only means of heating the rooms. The classroom was seated with double desks, worn and notched. They were very old and of cheap construction, evidently ordered a good many years ago from a certain mail-order house in Chicago. The oilcloth blackboards were scratched and torn, the floors were not oiled. Several panels were out of the teacher's desk. There were a few unprotected library books in the bookcase, one door of the case being off and the glass broken in the other. Some torn maps on the unpainted wall and a dilapidated globe on a three-legged table showed that there had been some effort on the part of the trustees to furnish some teaching equipment.

Small Return for High Taxes

The playground equipment consisted of two basketball goal posts and one long pole pushed through a crack in a near-by fence and used by the children as a seesaw. The school was in charge of two good-looking undergraduate women who were forced by the system in that community to try to teach eight grades. One of the women we found was a daughter-in-law of one of the local trustees.

For the lack of sufficient finance, we found that the school was to run for seven months only; the rate of millage on the dollar, however, was very much higher than was being paid in the neighboring city from which the "good-will" party had come. This high rate was due to the fact that there was very little wealth in the township. The county superintendent, a very capable young man, was with the party. He would have changed things for the better if the laws of that state had given him power to bring about a reformation. As he was powerless, he naturally devoted the major part of his time in getting in the good graces of the trustees so that they would vote for him at the next election. He said he had no office help, no traveling expenses, and no funds to employ a county supervisor. In fact, there was no classroom supervision in the county, excluding the city schools.

After handing out to the crowd the usual quantity of tin horns and rattlers, the president of the local board of trustees introduced the first speaker of the tour. This man paid a high tribute to American democracy and extolled the efficiency and glory of the country schools. He gave a long list of notables who were its products, including himself. It is not worth while for us to visit with the chamber of commerce further.

The Blank city school just described is conducted along business lines in charge of an executive of ability, who has been given power by an intelligent board to put into execution the things that go to make a great school system.

The country school just described is the product of an antiquated decentralized political program. It can never improve until the administrative machinery is changed.

Some Pertinent Questions

In view of the above statements relative to the two schools described, I wish to raise the following questions for your deliberation:

First, are towns and cities playing the financial game fairly with the rural sections? Second, should not every dollar's worth of taxable property in the county or state, including the city, bear approximately the same rate of taxation for school support? Third, should there be two or more distinct school systems in the same county? Fourth, should not all the revenues for the schools of the county be deposited to the credit of the same fund and used where needed? Fifth, why should there be two or more superintendents and two or more school systems in the same county? Sixth, should children living in wealthy centers be entitled to better schools in this democratic country? Seventh, why should incorporation lines be dead lines between the country and town so far as education is concerned? Eighth, why should city schools be favored with a professionally trained superintendent while country schools are forced to come under the jurisdiction of a poorly paid superintendent who must depend on political pull for his position? Ninth, is there not serious danger of some of the Enterprise school children growing up untrained and moving to Blank city and becoming after all a burden of the state and city? We must remember that the discriminating city-limits school law holds during a child's school age only. These questions that I have propounded are not new, nor have they been answered. To forward-looking sophisticated school officials they are Banquo's ghost ever confronting them. These questions are not peculiar to Texas. They are being propounded today in almost every county and state in the Union.

A Democratic Ideal—Not Socialism

Some will say this is a socialistic doctrine; others, perhaps, will say that it is paternalism or idealism. We may say or think as we like, the time is near at hand when America's great democratic doctrine of the Fatherhood of God and the Brotherhood of Man will so take hold of our people that all children in the state and even in the nation will be given equal educational opportunities at something like equal cost. The time is rapidly approaching when our American school will reach this democratic ideal. "What the best and wisest parent wants for his own child, that must the state want for all its children. Any other ideal is selfish and narrow, and if acted upon destroys our democracy."

It is my belief that the state's first step toward answering satisfactorily the questions just propounded and reaching the ideal democratic goal in education is to pass a law authorizing complete county control of school administration and county-wide budgeting of all school monies. This is absolutely necessary and fundamentally just and is the only method whereby equal rights to all the children and special privileges to none may be given. All tax money received for public education locally and from cities and wealthy centers of the county should be pooled and used for maintenance of all the schools of the whole county. In fact, all monies for school maintenance in a county should be received and disbursed on a county-wide basis. There should be only one school fund so far as distribution is concerned. Equal educational opportunities for all the children in the county cannot be approached in any other way. I would add further that all monies received from the state should be paid into the coffers of the county board, and not to individual districts. I would have a small county board elected by the people. Into its hand I would turn over the administration of all the schools of the county, including the city schools.

To substantiate the theories of school administration that I have advanced, I will describe concretely the parish (county) unit of school administration as is now in operation in Louisiana. There are some parishes (counties), however, in my state that have not taken advantage and have not lived up to the possibilities given under our laws. Briefly, our organization is as follows:

The Louisiana System

At the head of the parish (county) school system, which includes all schools of the parish, not excepting those in the cities and towns, is a parish board of education. This board of education is composed of representative citizens of the parish. No citizen subject to the board's authority or financially interested in its transactions is eligible for membership. Louisiana's school boards are small enough to work easily and effectively yet large enough to be representative; few boards have over ten. To guarantee stability and secure continuity of policies and to avoid local political strife, one third of the membership of the board is elected at each congressional election. The election of state and local officials in Louisiana does not take place at the time of the congressional elections. Members are eligible for reelection and removable only for cause. They are elected directly by the people and represent all parts of the parish. They are allowed no salary, except $5 per meeting, and mileage. They meet as often as necessary at the parish seat.

This board is responsible to the people of the parish for the satisfactory conduct of their schools. To meet these responsibilities the board of education is governed by the laws of the state, possesses full power over the financial business, and has educational administration and management of all the schools, which it exercises through its executive officer, the parish superintendent. This is fundamental; no board can be held responsible unless its powers are commensurate with its responsibilities. The most important powers vested in the Louisiana parish board of education are as follows:

Powers of Louisiana School Boards

1. To appoint an executive officer, county superintendent through whom the board exer-

A TRIBUTE TO THE UNKNOWN TEACHER

And what of teaching? Ah, there you have the worst paid, and the best rewarded, of all the vocations. Dare not to enter it unless you love it. For the vast majority of men and women it has no promise of wealth or fame, but they, to whom it is dear for its own sake, are among the nobility of mankind.

I sing the praise of the unknown teacher. Great generals win campaigns, but it is the unknown soldier who wins the war.

Famous educators plan new systems of pedagogy, but it is the unknown teacher who delivers and guides the young. He lives in obscurity and contends with hardship. For him no trumpets blare, no chariots wait, no golden decorations are decreed. He keeps the watch along the borders of darkness and makes the attack on the trenches of ignorance and folly. Patient in his daily duty, he strives to conquer the evil powers which are the enemies of youth. He awakens sleeping spirits. He quickens the indolent, encourages the eager, and steadies the unstable. He communicates his own joy in learning and shares with boys and girls the best treasures of his mind. He lights many candles which, in later years, will shine back to cheer him. This is his reward.

Knowledge may be gained from books, but the love of knowledge is transmitted only by personal contact. No one has deserved better of the republic than the unknown teacher. No one is more worthy to be enrolled in a democratic aristocracy, "king of himself and servant of mankind."—Henry Van Dyke.

cises the powers vested in it, and to provide the county superintendent with an adequate number of assistants. The superintendent acts as the board's secretary and treasurer.

2. To plan a complete system of schools for the parish, and in accord with this plan, to determine the kinds of grades of schools to be established and maintained, locate them, divide the school into the attendance districts, and provide for the transportation of school children. Consolidate schools, etc.

3. To provide and maintain grounds, buildings and physical equipment for all schools of the parish.

4. To see that the course of study is carried out according to law.

5. To provide instructional equipment and supplies.

6. To employ all principals, supervisors, and teachers on the recommendation of the superintendent.

7. To employ bus drivers and fix all salaries, assign them to their positions of work, to dismiss them for cause.

8. To prepare a budget of expenditures.

9. To order school-tax elections and school-bond elections and promulgate same.

10. To maintain a central warehouse for all school supplies for the parish.

11. To enumerate the educables of the parish.

While the law vests the parish board of education with full and final power and authority over financial, business, and educational administration of the schools, board members do not attempt to run the schools. They do not attempt to plan a system of the schools for the parish, decide on the kind of grades to be established, or do no work that is technical in its nature. This is left up to recommendations and decisions of the parish superintendent. The power vested in the parish board of education is exercised by the board's executive officer, the county superintendent. He takes the initiative and advises the board on all matters, and the board acts only through him, reserving, of course, the right to approve or disapprove his recommendations by modifications or amend them, and to pass judgment on his work. This conception of the most efficient method of managing schools—that is, that the board should act only through its executive officers—does not subordinate the board to him nor does it relieve the board of its responsibilities; but this conception of the place of the county superintendent in a well-organized county system does give new importance to the office, because it recognizes the fundamental need of trained and continuous professional leadership.

With the business and professional responsibility of administering to all the schools of an entire county, the board's executive-superintendent should possess superior traits of leadership. He should be a man of known integrity and possess ripe experience and ample scholarship, and have the ability to organize and sell the schools to the people of the county. He should receive a salary commensurate with men who are doing a like service in the large organized business enterprises.

Other Advantages of the Plan

The centralized county-unit plan in Louisiana has been in operation a number of years. That the public has approved of this plan is evidenced by the number of one-room schools that have been eliminated during the past few years. According to the report of the state superintendent of public instruction, there are left only about 600 one-room schools in the state. About 1,300 automobile trucks are engaged to transport 40,000 country children. The cost per child for transportation is $26.45 per session. There is not and should not be any thought of returning to the old system of small local units of local management of country schools. The policy of consolidation will be continued and will keep pace with the good-roads program. For that, and no other way, can rural children be provided with the same high type of instruction as is enjoyed by children living in larger centers of population.



JOHN H. LOGAN,
Superintendent of Schools-Elect,
Newark, N. J.

Dr. John H. Logan, state commissioner of education of New Jersey, has been elected by the Newark board of education as superintendent of schools, at a salary of $15,000. The appointment becomes effective September 1.

Dr. Logan is a graduate of Mercer University and the Union Theological Seminary and completed his postgraduate work at the Universities of Marburg and Berlin, Germany. He was formerly an instructor at Colgate University and Rutgers College. Dr. Logan has made frequent trips to France, England, and Germany for the purpose of studying school systems.

In commenting on the choice, the Newark Star-Eagle says: "It is fortunate Mr. Logan comes to Newark without any entanglements. He is not even under obligations to the board members, for they asked him after Dr. Payson Smith of Massachusetts declined to come. He will be in a position to judge conditions on their merits and to guide them accordingly. His experience as state commissioner during the past two years will be of value, although he had had no connection previously with public schools. That also may be advantageous in that he is probably not infected with any educational isms or prejudices."

County pooling and county budgeting and distribution go with the county-unit-administration program. This method of distribution of school monies enables all children of the county to have the same educational opportunity. In my home parish, this plan has enabled the parish school board to build uniform buildings, to equip them with standardized equipment, and to transfer all children living more than two miles to their consolidated high schools.

Louisiana school boards are both executive and legislative bodies. They serve for the parishes as the courts of last resort in all school matters. Frequently, when serving in an executive capacity, they are misunderstood and accused of being autocratic and undemocratic. Any student of government who has studied school affairs must admit that too much so-called democracy in school government often brings about chaotic conditions, and, as a result, children suffer. Leadership in school administration is as important as leadership in any other line of activity. School boards and school officials should assume leadership. The education of the children is far too important to be left entirely to the whims and initiative of persons who are not responsible for the success or failure of the school system. The people are looking to boards and school officials for sympathetic direction, friendly guidance, and school leadership. Shall our people stand pat on the narrow-minded interpretation of democracy as related to school administration and by so doing cheat the children out of their just heritage?

May the time soon come when society will be far more interested in the welfare of the child than being so vitally concerned about an ultra-democratic form of school government. When our lawmakers and educational leaders give a wider interpretation to the meaning of democracy, educationally, when they interpret its meaning in terms of the state's responsibility to the child, then and then only, will all the children of all the people of this Union be given equal educational opportunities at equal cost.

Beware of Too Much Theory

By a Former Teacher and School-Board Member

From a careful observation lasting over a period of years, I believe if I were on a school board and looking for a superintendent I would not choose one with an itch for experimentation or one brimful of new theories. These qualities are often found in the same man. Such a one is usually young.

In fact I believe I should go farther than my first statement; I would not choose a young man, no matter how capable, as superintendent of a large school system, for the simple reason that he will be too theoretical. Sound educators have learned from their experiences, experiences gained slowly, a little here and a little there, through a long period of years, while they have still held to the general plan which has been found, up to that time, most effective.

The idea of the young educator is to try first one thing and then another in a wholesale fashion, to experiment with the minds of the children as physicians do with the bodies of guinea pigs. There is no well-thought-out plan, no outline, not even in curricula. It is all "in process."

In addition, the theoretical superintendent is too much inclined to wipe out old measures, old means, old institutions, even those which have been proved most worth-while, and to substitute new schemes which sound well on paper and which are not likely to work.

The substantial measure is old fashioned, out of date. That alone condemns it to him. But the wise educator knows that in education as in conduct there are some requisites as old as time. In confusion, resulting from wholesale experimentation, these ideas are lost.

So often the young superintendent has had but little experience in actual teaching; his quick promotion to an executive position has precluded that. This lack of experience handicaps him in being a real leader of teaching. He can tell his teachers of those plans only that he believes will be good; he gets his ideas from books and from others; he is compelled to give them out without proving them to be true.

He is like the psychologist who learns every theory on adolescence advanced by professionals, but lets his own son go through that interesting and trying period without association with himself. He makes no opportunity to verify his theories.

The theoretical young superintendent overstresses and overestimates the value of degrees and attendance of teachers at summer school. Truly some standard should be established, but book learning can be overdone. All school-board members of experience have seen instances of this.

Too much theoretical knowledge is likely to separate the learned one from his fellow man. It is only through association with his fellow man, seeing his needs, his desires, his points of contact, that the teacher learns how to teach.

(Continued on Page 147)

A Study in Special Supervision

E. W. Tiegs, Director of Research, Minneapolis, Minn.

(Concluded from August)

V. Distribution of Special Supervisory Service

One of the assumptions made in Section II of this study was that *special supervision should be given according to needs.* Supervisors are not entirely in accord with this assumption, a few even holding that it should be evenly distributed according to size of buildings.

In order to determine what the actual practice had been, the service rendered each building by each of five departments for a school year was computed from the supervisory schedules. There were minor deviations from these schedules in actual practice, but they represent the judgment of supervisory offices as to where such supervision should be given, and are the most accurate records available.

Five rankings of the schools were then made according to the actual number of hours of supervisory service extended by each of these five departments. Each of these five rankings was correlated against a ranking of the schools according to size, using the rank-difference method. The following coefficients of correlation were obtained.

TABLE VI. Relation Between Size of Building and Extent of Service.

Department	r=Between Service and Size of Building	No. of Supervisors in Department
Nature Study	—.28	1
Physical Training....	.00	3
Writing	+.31	3
Art	+.33	4
Music	+.81	5*a*
Sum of Service of Five Departments	+.78	16

r=Coefficient of correlation.

a=One supervisor who did not take part in survey included here.

Table VI reveals the fact that as supervisory departments increase in size, they distribute their service more and more according to the size of buildings. On the other hand, this does not constitute proof that this service is not also distributed according to needs; but it does not constitute evidence in favor of such a presumption.

There is no exception to this fact. Although physical training and writing had three supervisors each, the writing department gave more hours of supervisory service in the buildings. And when the service of these five departments is added, a new ranking made, and a coefficient of correlation computed between this ranking and the size of building ranking, this coefficient turned out to be +.78. This appears to be rather definite evidence of the fact that, on the whole, special supervision for the year tended to be distributed according to the size of buildings.

VI. Size of Special Supervisory Fields

It is difficult to improvise a technic by which supervisory fields may be accurately compared. Some supervisors are concerned only with instructional supervision; others add to this textbooks, supplies, and equipment; others must take, in addition, responsibility for the selection of teachers. In some departments, teachers have 30 to 40 pupils, while in some others, there are 75 to 100 in a class. But supervisors, in the last analysis, are supervising teachers and not pupils; and duties other than instructional supervision can frequently be routinized. On the whole, it appears that the "teacher-hour" unit is the most usable measurement. It may be defined as the full teaching service of one teacher for one hour.

Table VII, which follows, presents the total "teacher-hour" units of service by special departments and by types of schools.

All of the high-school data have been taken from the actual program cards in the office, with one exception: The program cards omitted the classes in writing in the seventh, eighth, and ninth grades of four schools. In this one case, it was assumed that the principals were following the course of study, and the supervisory fields were computed from the number of classes. Inasmuch as no significant error was discovered in checking the entire programs of sixteen high schools, this assumption appears to be justified.

The totals of Table VII constitute the first column of Table VIII. By dividing the total weekly supervisory load in each department by the number of staff members in that department, we obtain in column 3, the number of teacher-hour units for which each individual supervisor is responsible each week.

In Table IX, these supervisory loads are compared. If we use as our base the average individual supervisory load (884 teacher-hours per week), column 2 shows what per cent of this average load individual supervisors of each department carry. The range is from 57 per cent in the case of music to 209 per cent in the case of manual training. If we use the lowest load (music) as our base, our range is from 109 per cent in the case of nature study to 373 per cent in the case of manual training. It is evident that there is a wide variation in the supervisory load assigned supervisors in the various special departments.

TABLE VII. TEACHER-HOUR UNITS PER WEEK SUPERVISED BY SPECIAL DEPARTMENTS

Grades	Art	Writing	Music	Nature Study	Home Economics	Special Classes	Physical Training	Manual Training
KGN.	.....	.....	34.34	.....	.....	....	.....	.....
1.	315.5	266.25	266.25	106.5	.....	....	301.9	.....
2.	265.5	221.25	221.25	118.	.....	....	250.9	.....
3.	267.	222.5	296.66	89.	.....	....	252.3	.....
4.	256.5	213.75	285.	114.	.....	....	242.25	.....
5.	243.	202.5	270.	108.	.....	....	229.5	.....
6.	241.5	201.5	268.33	107.3	.....	....	228.	.....
Total for El. School...	1589.	1327.75	1607.49	542.8	.....	....	1504.85	.....
Grammar Schools	84.	84.	126.	.....	252.	....	168.	252.
Jr.-Sr. Highs	711.35	282.80	739.80	.....	1246.5	....	869.40	1598.5
Totals.....	2384.35	1694.55	2473.29	542.8	1498.5	2358*	2542.25	1850.5

*Only grand total available.

TABLE VIII. AVERAGE SIZE OF SPECIAL SUPERVISORY FIELDS

Department	1 Total Teacher-Hour Units per Week	2 Number of Supervisors	3 T.-H. Units per Supv. per Week
Art	2384.35	4	596
Writing	1694.55	3	565
Music	2473.29	5[1]	495
Nature Study.....	542.8	1	543
Home Economics.....	1498.5	1½[2]	999
Manual Training.....	1850.5	1	1850
Physical Training.....	2542.25	3	848
Special	2358.00	2	1179

[1]One supervisor who did not take part in the survey included here.

[2]Supervisor gives half time to lunchrooms.

TABLE IX. COMPARISON OF RELATIVE SIZE OF FIELD SUPERVISED BY EACH STAFF MEMBER

Departments	1 T.-H. Units per Supv. per Week	2 per Cent of Average[1]	3 Per Cent of Lowest Unit (Music)
Art	596	67%	120%
Writing	565	64%	114%
Music	495	57%	100%
Nature Study	543	66%	109%
Home Economics....	999	113%	202%
Manual Training....	1850	209%	373%
Physical Training...	848	96%	171%
Special	1179	133%	238%

[1]The average is 884.

VII. Cost of Special Supervision

It is impossible to take into account accurately every single item in the cost of special supervision. For example, office supplies are not charged by departments, but to the offices as a whole and must be estimated. But the total of these items which are not distributed is trivial in comparison with salaries, auto upkeep, and clerical assistance which are definitely known. Table X, which follows, presents in column 2 the total weekly costs of special supervision, and in column 3, the weekly costs per teacher-hour unit.

The data of Table X are reproduced in column 1, Table XI, for purpose of comparison between departments. Using as the base the average weekly cost of special supervision per teacher-hour unit ($0.10), column 2 shows what per cent of this average special supervision in each department costs. The range is from 60 per cent in manual training to 150 per cent in the case of nature study. If instead, the unit of lowest cost (manual training) is used as the base, the range is from 125 per cent in the case of home economics and special classes, to 250 per cent in the case of nature study. The costs of special supervision per teacher-hour unit are more than twice as much in some departments as in others.

VIII. Summary

The significant facts revealed by the materials of this study are as follows:

1. Three-fourths of the special supervisory service is initiated by supervisors themselves.

2. Approximately three-fourths of this special supervisory service is observed very little, or not at all, by principals, while about one-fourth is observed in its entirety.

TABLE X. THE COST OF SPECIAL SUPERVISION BY DEPARTMENTS

Departments	1 T.-H. Units per Week[1]	2 Cost per Week[2]	3 Weekly Cost of Special Supervision per T.-H. Unit
Art	2384	$294.63	$ .12
Writing	1695	206.38	.12
Music	2473	311.64	.13
Nature Study	543	83.20	.15
Physical Training.	2542	240.32	.09
Home Economics..	1498	120.29	.08
Manual Training..	1850	104.85	.06
Special	2358	179.75	.08

[1]To nearest .5 [2]Cost includes salaries, clerical assistance, and auto allowance. No reliable figures could be obtained on other comparative data.

TABLE XI. COMPARISON OF WEEKLY COST OF SPECIAL SUPERVISION

Subject	1 Weekly Cost of Supervision Per T.-H. Unit	2 Per Cent of Average	3 Per Cent of Lowest Unit (M. T.)
Art	$.12	120%	200
Writing	.12	120%	200
Music	.13	130%	217
Nature Study.....	.15	150%	250
Physical Training....	.09	90%	150
Home Economics.....	.08	80%	125
Manual Training.....	.06	60%	100
Special	.08	80%	125

The average is $0.10.

3. There is considerable variation in the length of the supervisory day as well as between the average for different departments.

4. Some departments reach, during a week, eight or ten times as many teachers as do other departments.

5. There is considerable variation in the supervisory technic used in different departments, some doing almost all demonstration teaching, and others doing none.

6. Some departments take teachers from surrounding classrooms when a demonstration lesson is being given, thus leaving several groups of children to shift for themselves during this period.

7. Certain departments are able to spend a larger proportion of their time in direct service in the schools than others.

8. Special supervisory service appears to be distributed according to size of buildings.

9. There is great variation in the size of field each special supervisor is expected to cover, some staff members being responsible for fields two or three times as large as others.

10. The teacher-hour unit supervisory costs vary considerably from department to department. In the most expensive department, this cost is two and one-half times that of the department which has the lowest unit costs.

Legal Aspects of Residence for School Purposes

C. C. Liebler, Port Arthur, Texas

Very early in the history of public education the question of which children in each school district should be admitted to school without paying tuition arose. In some cases the controversy was occasioned by the absence or inadequacy of existing educational opportunities in the child's original home district. In many instances the dispute grew out of conditions incident to the breaking up of homes. Thus the highest tribunals have often been called upon to determine the right of a child to be educated by a particular district.

The courts have not interpreted and applied principles with much uniformity. In general, the decisions follow two lines of reasoning: one considers that the schools should be free only to those children whose parents or legal guardians have their domicile in the district; the other holds that mere residence in the district is sufficient. The right to be educated in the public schools is one derived from legislation and is subject to such limitations as the legislature may make. (Dallas v. Fosdick, 40 How. Pr. 249; Haverhille v. Gale, 103 Mass. 104 [1869]; Bissell v. Davison, 65 Conn. 183, 32 Atl. 348, 29 L. R. A. 251; Staffel v. San Antonio School Board, 201 S. W. 413, [1918]).

The Liberal View

An early case in which a liberal interpretation of the statute was applied is District No. 2 v. Pollard (55 N. H. 503, 35 Cyc. 1112 [1875]). In this case some minor children of paupers had been committed to the county poor farm. The law required the overseers to provide educational opportunity for the children in these institutions. The overseers of the poor, in this particular case, desired to send the children to the school located in the district in which the poor farm was located, since there were no other school facilities available. The court held that these children had a right to attend public school in the district in which the county farm was located, holding that the test for residence for school purposes is not the same as the test for the exercise of suffrage or for taxation. "No previous length of residence" said the court, "in the district was required, provided the scholar when he goes there is rightfully and properly inhabiting the district."

Another rather early case involving a slightly different point is that of State v. Thayer (74 Wis. 48, 41 N. W. 1014, [1889]). In this case the father had deserted the family and had left the mother with three minor children to support. The mother was a teacher and found it difficult to support all three children. So, a home for one of them was found in another city where the child could work for its room and board. The district to which the child went, refused it permission to attend school and the matter came to the state superintendent of schools for review. Upon his decision for the child, *a writ of certiorari* brought the matter to the supreme court for final decision.

It was contended by the district that the domicile of the parent determines the domicile of the child and that, therefore, the domicile of the child was in the same place as that of its mother. The state superintendent, however, pointed out (and his comments were quoted with approval by the court) that, while higher courts have strongly held that the domicile of the parent is the domicile of the child, the courts have insisted that it is the domicile of the father which is the determining factor. Furthermore, the state superintendent contended, most of these cases had reference to the custody and control of minors and the estate of minors, hence these decisions did not include consideration and determination of those questions which relate to special rights and privileges which are affected by simple residence or inhabitancy.

In the case under consideration, the father had deserted the family and his whereabouts were unknown, thus it was impossible to determine where the father actually had his domicile. Hence, if the rule stated above were to be invoked, the child might be denied schooling in any district, and in other cases it would mean the break-up of families, which contingency the law did not contemplate. The court held (thus sustaining the state superintendent) that "to establish a rule that a minor cannot have residence for school purposes other than that of his parents would in many cases deprive him of all benefits of the schools."

A Common-Sense Interpretation

A common-sense view of the term "residence" is to be noted in a New England case. In Yale v. West Middle School District (59 Conn. 489, 13 L. R. A. 161, 22 Atl. 295, [1890]), it was held that a child whose parents are nonresidents, and who lives, with the parents' consent, with one who cares for him, and with whom he is expected to live permanently, has a right to attend school in the district in which the foster parents reside. The court held that residence is distinguished from domicile and is construed liberally to mean "to live in," or "be an inhabitant of a school district" for "if any child is actually dwelling in any school district, so that some person there has the care of it and it is within the school age—and is not instructed elsewhere, then that child must go to the public school."

In this case the child, Ada Austin, a girl twelve years of age, had lived with her foster family for a number of years, and it was alleged that she expected to live with the same foster parents as their child during their lifetime or until she should marry Although the child's natural parents had never lived in the state and at the time of the action were residing in Missouri, the court held it is "not necessary that a child be domiciled in the district but it is enough if it is residing in the district in the ordinary sense of that term." The court concluded that the child probably did not have a domicile in the state but did have a residence therein.

An Illinois court has taken a similar view in a slightly different situation. In Board of Education v. Lease (64 Ill. App. 60, [1895]), the court said, in part, "Residence is to be understood in its broad sense of inhabitancy, the act of dwelling in a place." In this case two children were to live with their aunt as long as she lived in a certain locality, or, in the event of the mother's death, permanently. The aunt as guardian had the sole management and control over the children.



Bona Fide Residency

In Mizner v. School District No. 2 (2 Neb. Unoff. 238, 96 N. W. 128, [1901]) the court seemed to place a more liberal interpretation on the term "*bona fide* resident" than in the prior rulings.[1] Here the court held that where a child who goes, with the consent of its parents, to live with the family of another as a member thereof, under an agreement that it is to be the child's home and the child is to be provided for, such a child becomes a *bona fide* resident of the district in which the foster family lives. In this case a girl went to live with her brother-in-law, although her parents were both living. It does not appear from the evidence that any time was set for her to return home, if ever, nor was she bound to stay with her brother-in-law a definite length of time, except that at the time the arrangement was made, it was agreed that she was to abandon her father's home. Yet the court held that there was an agreement between the brother-in-law and the girl that she should live with him until twenty-one years of age.

Practically the same decision was reached in McNish et al v. State ex rel. Dimick (74 Neb. 261, 104 N. W. 186, 12 A. & E. Ann. Cas. 896, [1905]). In this case the mother had died and left the father with six children. He relinquished custody and control of one child to a grandmother who agreed to rear, educate, and treat it as her own child. (The child had been enumerated on the school census but this fact was not admitted in the evidence because it was offered as parol evidence. This was not the "best evidence" since the fact was a matter of record in the county superintendent's office and the principle of "best evidence" was applied.) The child was admitted at first without question, but later the grade in which she was enrolled became crowded and the child was excluded from school.

The board relied on a ruling that "children whose parents (or guardians who have legally adopted them) do not reside in the district shall be considered nonresident pupils. . . . " The statutes permitted the board to make rules and regulations for the administration of its schools, but the court held that the board was governed by the statutes in this matter which provided that "schools should be free to all children—whose parents or guardians live within the limits of the district." Hence the board was not permitted to qualify the word "guardians" by the clause "who have legally adopted them."

The court also held that the statute was to be interpreted broadly, and further held that mandamus will lie to compel a school board to admit a foster child of school age who is a *bona fide* resident of the district to the schools of the city where its foster parents live; that it is not necessary to be entitled to this relief for the foster parents to have legally adopted the child.

The Motive of Residence Important

In another Nebraska case (State ex rel. Mickey v. Selleck et al. 76 Neb. 747, 107 N. W. 1022, [1906]), the court interpreted residence broadly. The children of several state officers, who were compelled by law to live in the capital city were denied free admittance to the public schools of Lincoln. The court held that, if a family or person having legal custody or control of a child remove to and live in a school

[1] Ex. Rel. Vale v. School District of Superior (55 Neb. 317 [1898]).

district other than the district of their legal residence and such removal is not for the purpose of obtaining school privileges, but is principally from other motives, the child is entitled to free school privileges while so living in the district.

The motive of the child's residence was the deciding point in several other cases. Thus, in State ex rel. Smith v. Board of Education (96 Wis. 96, 71 N. W. 123, [1897]), it was held that where the primary purpose of going into a district is to secure a home with a particular family, the child is entitled to free tuition; but if the primary purpose is to participate in school facilities, tuition must be paid, even though there is some incidental purpose to be subserved.

In School District No. 1 in Milton v. Bragdon et al. (23 N. H. 507 [1851]), it was decided that minor children sent into a school district by their father, to reside with an aunt, under indentures of apprenticeship, which were made only for the purpose of sending the children to school, are liable to an action by the district.

The father removed from the district but left some chattels at his former residence in charge of two sons who were to live with an aunt who resided in the district, look after the property, and go to school. Objection being made by the district to the attendance of these boys upon its school, the father apprenticed the boys to their aunt for two years. According to the terms of this indenture the boys were to render faithful service to their aunt and she was to board them, send them to school, and teach them farming. But the jury decided the indenture was made in order to evade the statute, and the ruling of the higher court followed.

Control of Child Determines Residence

In Stanford Graded Common School District v. Powell (145 Ky. 93, 140 S. W. 67 Ann. Cas. 1913 B, 1016 and note, 36 L. R. A. [N. S.] 341, [1911]), it was held that the residence for school purposes of a child whose father, upon the mother's death, having no home or means of securing one, gives the child up to his sister who was to have full charge of it and give it a home, is determined by the residence of the sister. Chief Justice Hobson, in delivering the opinion of the court quoted with approval the rule laid down in 35 Cyclopedia 1112:

"As a general rule the free-school privileges of a district are open only to children, otherwise eligible, who are *bona fide* residents of that district; and in determining whether a person is or is not a resident in a school district within the meaning of such a rule, the usual and ordinary indicia of residence, or absence thereof, should be the proper guide, and not the secret mental resolves or concealed intentions of persons living, or having lived in the district. Such rule, however, does not usually require that there should be a legal domicile; but it is sufficient if the child and its parent, or person having control of him, are actually resident in the district, with apparently no present purpose of removal."

The mother had died when the child was five years of age. At the present time of the action the child was twelve years of age and had lived with the father's sister since that time, pursuant to an agreement between the parent and his sister, giving the latter full custody and control of the minor.

Temporary Removal vs. Residence

In the Board of Education v. Hobbs (8 Okla. 293, 56 Pac. 1052 [1899]), the court held that the destruction of the common home and temporary removal from the district does not necessarily terminate residence and destroy the right to attend school. Furthermore, by counting a child on the school census, a district is estopped from charging tuition or denying school privileges to that child.

The most liberal interpretation of residence and one that is far beyond the common sense acceptance of the term is to be found in Board of Education v. Crill (133 N. Y. Supp. 394 [1911]). In this case it was held that parents living in a portion of a rented house in a town acquired residence in the town, entitling their children to school privileges, within the meaning of the law providing free schools to all persons residing in the district, although the parents retained their residence in the country; returned there at the end of the year, while the father continued to vote at the former domicile and was even a candidate for a public office there. The whole question of domicile and residence was carefully considered by the court. It was held that although one may have but one domicile, one may have several residences. Residence was defined as a "word used in law to denote the fact that a person dwells in a given place, a word capable of different meanings, including temporary residence or permanent domicile." It was further held in this case that, if a taxpayer has two residences in different taxpaying districts, he is taxable at that place which was originally his domicile, provided the opening of the other house has not involved the abandonment of the original domicile, or that place that he regards and claims as his residence.

The courts are not inclined to deny school privileges because of acts of parents. Thus a Missouri court has held that a resident of a school district, who is entitled to school privileges for his children, is not estopped to assert his right by the fact that he failed or refused to attend a meeting of the school board and make an affidavit prepared for him respecting his residence. (State v. Penter, 96 Mo. App. 416, 70 S. W. 375 [1902]).

The Stricter View of the Term "Residence"

We now come to those cases which hold that residence and domicile are practically synonymous. In State ex rel. Vale v. School District of Superior (55 Neb. 317 [1898]), the court held that residence is synonymous with domicile. "One's residence is where he has his established home, and to which when absent, he intends to return. To effect a change of domicile, there must not only be a change of residence but an intention to permanently abandon the former home." This interpretation was also held in a former decision (Wood v. Raeder, 45 Neb. 311, 63 N. W. 853) which was cited by the court as applying to the present case. The evidence showed that the Vales lived in Kansas and that each fall the father moved his family and a portion of his effects to Superior, Nebraska, where the family lived until spring when it returned to the Kansas farm. The parent claimed that it was his intention to establish his domicile in Superior, although he spent most of his time on the farm.

In an early Missouri case, Binde v. Klinge, (30 Mo. App. 285 [1888]), it was held that a child sent to live with its grandmother, so long as the latter might live, is not a resident of the district in which the grandmother resides, if the parents live in another, where the statutes make residence a prerequisite to such privileges. At that time boards of education were authorized to admit pupils "not residents within the district and prescribe the tuition fee to be paid." In reaching the above decision the court said, in part: "Evidence entirely excludes the conclusion that Paula, (the child) has been sent from her father's home in Montgomery county merely to obtain the advantage of a better school at Herman."

A Missouri Case

A more recent opinion reveals clearly that the courts in Missouri hold that one must have a domicile in a school district to be entitled to free school privileges. In Northern v. McCall (189 Mo. App. 362 [1915]), the court held that where a man of family has two places of residence at different times of the year, his domicile is deemed to be the one which he describes or deems to be his home; the one which appears to be the center of his affairs, where he votes or exercises the rights of citizenship. The court also said "one's place of residence being entirely one of intention, an expression of that intention can be overcome only by strong circumstances to the contrary."

In this case it seems that the father had moved his family from a farm in Missouri into the city of Rolla, Missouri. He brought a portion of his effects with him into a house which he leased as a joint residence and place of business. In the spring at the close of school, the family would return to the farm. But the court decided he had his home in Rolla because: (1) He had a habitation there furnished and used as a home; (2) he received mail there except when on the farm; (3) he voted at one city election; (4) his children attended school at Rolla the first year of his residence there and before the rule of tuition was made; (5) the evidence showed that he had made a lease for office and residence a year before the rule regarding tuition was made. The court cited and applied two earlier cases: Chariton county v. Moberly (59 Mo. 238); and Barnard School District v. Matherly (84 Mo. App. 140).

In Gardner v. Board of Education (5 Dab. 259, 38 N. W. 433 [1888]), it was decided that where one owns a farm which has been his domicile and takes his family and a part of his furniture to town during the winter, living there in a rented house, employing a man to care for the farm during the absence and returning each spring with family and furniture to the farm, although voting unchallenged at an election in the city, claiming an intention to make that his domicile, his legal domicile continues to be at the farm. Hence, in such a case, the children are not entitled to free school privileges in the town district. According to the evidence, neither of the parents had an occupation or business in the city.

Attendance of Children Domiciled in an Institution

It was also held in Lake Farm v. District Board No. 2 (179 Mich. 171), that the commitment of a child to an institution does not give such child the right to attend school in the district in which the institution is located. But in Children's Aid Society v. Hendreckson (104 N. Y. Supp. 122 [1907]) it was held that a minor who is living in a foster home as a member of the family but without any fixed period of residence, has its home with the foster family and is entitled to school privileges. In this case, however, the child's parents, who were both dead, had their last domicile in the district in which the child was living at the time of this action, and it is not clear that the court was not very

(Concluded on Page 148)

COMPENSATING TEACHERS

The rise in the cost of living, the widespread tendency to luxury, and the examples of extraordinary and often immoderate salaries paid in business have caused some teachers to feel that the pay of the teacher was deliberately set by social practice upon a scale that was neither generous nor just. These inequalities always exist. The rewards of the average teacher are paid not in money, but in the intellectual satisfaction of teaching and research, the fellowship of cultivated colleagues, and the companionship of young minds and young hearts. The great majority of teachers never get beyond the stage where they and their families must be content with a modest, and oftentimes a precarious, living.—Henry S. Pritchett, President, Carnegie Foundation.

School Consolidation in Indiana

Roy R. Roudebush

Indiana has long been considered by specialists in rural educaton and persons interested in school consolidation as one of the pioneer states in the rural-school-consolidation movement in the United States. Frequent reference, in rural-school literature of the past two decades, has been made to Indiana's leadership in consolidation.

Consolidation in Indiana means the combining of the schools of more than one district.[1] The school territory of Indiana was early divided into districts, and although the state now has a township system of public schools, the attendance for any school comes from the original district or combination of districts. One way in which an idea of consolidation in the state may be had is to note the number of one-teacher district schools for various periods and their rapid decrease. At present there are 2,725 one-teacher schools in Indiana.[2] There were 8,625 in 1870; 9,044 in 1880; 8,943 in 1890; 8,321 in 1900; 6,693 in 1910; and 4,936 in 1920.

The Contributing Factors

Some of the factors which have contributed to and hastened the abandonment of the one-teacher schools and their consolidation with other schools are:

1. The state law of 1899, permitting transportation at public expense, and the law of 1907, requiring such transportation in certain cases.
2. The compulsory attendance law of 1899.
3. The law of 1901, permitting township school trustee to abandon a school with an average daily attendance of 12 pupils or fewer during the previous school year; the law of 1907, requiring trustee to abandon such school 1907, requiring trustee to abandon such school, and permitting it to be abandoned if attendance be 15 or fewer.
4. The law of 1901, providing for the abandonment and consolidation by petition of a majority of the legal voters of the district.
5. The desire for better schools and the consequent petition by the patrons for abandonment and consolidation, or the consent of the patrons to such action.
6. The condemnation and closing of buildings as unfit for school purposes, by the state board of health.
7. The active campaign by school officials, especially about the year 1900.
8. Excellent roads in certain parts of the state.
9. The desire to secure, and also to provide, high-school facilities.
10. The organization of six-year high schools.

At present there are three counties in Indiana which have no one-teacher schools: Delaware, Hancock, and Marion. There are four counties with but one such school each: Henry, Randolph, Wabash, and Wayne. These counties are all in central or east-central Indiana.

There are 6,218 fewer one-teacher schools in Indiana at present than there were in 1890. As compared with that date, 69.5 per cent of the one-teacher schools have been abandoned and consolidated. Of the 30.5 per cent which remain, many are in portions of the state where there are at present serious topographical obstacles to further consolidation. And yet many are in portions where there are no such obstacles. It is erroneous to think that all the lack of consolidation is in the rough, hilly, southern part of Indiana. Some of the very best counties in the state have as many as 40, or more, one-teacher schools. Of the 92 counties in the state, those which have the following ranks in consolidation since 1890 are in northern Indiana: 74th, 72nd, 70th, 67th, 64th, 61st, 59th, 58th, 57th, 52nd, and 50th.

[1]In this discussion a consolidated school is defined as any school which, in addition to accommodating the pupils of its own district, accommodates all the pupils of a district formerly accommodated by another school which has been abandoned.

[2]As of February 1, 1927. Data for 1926-27.

The Present Situation

There are 1,402 consolidated schools in Indiana.[3] Of this number, 296 are one-teacher schools, 256 are two-teacher schools, 132 are three-teacher schools, and 718 are schools which have four or more teachers each. These figures do not include consolidations which have been made with cities and towns, where the schools are under the direct control of local school boards.[4] There are at least 53 such schools in the state. Neither are town or city schools, which receive the pupils of the surrounding township by transfer, included.

The total number of schools is 4,106, divided as follows: one-teacher schools, 2,656; two-teacher schools, 482; three-teacher schools, 166; four- (or more) teacher schools, 802.

There are 182,917 pupils enrolled in the consolidated schools. Of this number, 7,422 are in the one-teacher consolidated schools; 13,041 are in the two-teacher consolidated schools; 11,092 in the three-teacher consolidated schools; and 151,362 are in the consolidated schools having four or more teachers each. Thus, 34.1 per cent of all the schools are consolidated schools and 70.0 per cent of all the pupils attend some form of consolidated school. Table 1 summarizes the data as to the numbers of schools, enrollments, and percentages.

TABLE 1

Numbers and Enrollments in All Schools and in Consolidated Schools, Classified According to the Number of Teachers per School; Also Percentages

Schools Classified According to No. Teachers	Total		Consolidated		Per Cent	
	Number Schools	Number Enrld.	Number Schools	Number Enrld.	Cons. are of Tot. No.	Cons. Enrl. is of Tot.
One-Teacher	2,656	60,114	296	7,422	11.1	12.3
Two-Teacher	482	23,320	256	13,041	53.1	55.9
Three-Teacher	166	13,865	132	11,092	79.5	80.0
Four- (or more) Teacher	802	164,058	718	151,362	89.5	92.3
All Schools	4,106	261,357	1,402	182,917	34.1	70.0

Enrollment in Rural Schools

It is interesting to note the enrollment per teacher, and also the enrollment per school, for the one-, two-, and three-teacher schools. Most of the larger schools have high schools included, and it is not possible to present the data for them on this point. These smaller schools are perhaps all elementary schools. Table 2 presents this data in classified form.

TABLE 2

Enrollment per School and Enrollment per Teacher in One-, Two-, and Three-Teacher Schools

Type of School	Number Teachers	Enrollment	Average Enrollment Per Teacher
Consolidated	One	25.1	25.1
Consolidated	Two	50.9	25.4
Consolidated	Three	84.0	28.0
Nonconsolidated	One	22.3	22.3
Nonconsolidated	Two	45.5	22.7
Nonconsolidated	Three	81.6	27.2
All schools	One	22.6	22.6
All schools	Two	48.4	24.2
All schools	Three	83.5	27.8

In Table 1 it was seen that 70 per cent of all the pupils enrolled are enrolled in consolidated schools. This is divided as follows: In one-teacher consolidated schools, 2.8 per cent of all enrolled; two-teacher consolidated schools, 5 per cent; three-teacher consolidated schools, 4.2 per cent; four- (or more) teacher consolidated schools, 60 per cent. In this connection, it is also of interest to note that 23 per cent of the rural-school population of Indiana is enrolled in one-teacher schools.

It has already been said that there are some counties in Indiana which have no one-teacher schools. There are four counties which report complete consolidation, that is 100 per cent consolidation: Delaware, Hancock, Randolph, and Wayne. On the other hand, there are three counties which reported no consolidated schools whatever. Table 3 shows the minimum and maximum numbers of the various kinds of schools, the median number for the counties, and the range between counties in the state.

While there are some counties in the state which reported no consolidated schools, every county has fewer one-teacher schools now than in 1890. Figure 1 shows graphically the numbers of counties which have abandoned, the given percentages of their one-teacher schools, as compared with the number in 1890.

Transportation is an important item in consolidation. A few facts are here given to show progress along that direction. The report of the state superintendent of public instruction for 1906 includes this statement: "At the present time there are 830 small schools abandoned; 9,424 pupils are transported at an average daily cost of $1,034.04. There are 561 wagons employed for this purpose, at a cost of $1.84 per day for each wagon. In the 92 counties 60 have begun this practice, and it has been going on for 12 years or more in parts of the state."

Table 4 gives the cost of transportation during more recent years.

TABLE 4

Cost of Transportation

Year	Total Cost	Number of Children Transported	Annual Cost per Child Transported	Cost per Child per day
1915	$ 828,011.00	37,344	$22.17	$0.158
1920	1,918,034.00	73,488	26.90	0.192
1925	3,790,181.57	122,926	30.83	0.19
1926	3,990,388.53	124,027	32.17	0.20

Transportation, at least some transportation, is provided to 275 one-teacher consolidated schools, to 243 two-teacher consolidated schools, to 127 three-teacher consolidated schools, and to 683 consolidated schools having four or more teachers each. In other words, transportation is provided to 92.9 per cent of the one-teacher consolidated schools; to 94.9 per cent of the two-teacher; 96.2 per cent of the three-teacher, and to 95 per cent of the consolidated schools having four or more teachers; and to 94.7 per cent of all the combined consolidated schools.

In 1916, 42,820 pupils were transported and all but six of the 92 counties reported some transportation. In 1921 the number transported was 67,983, and only one county failed to report any transportation. In 1926, all counties reported

[3]This data was secured by the questionary method. There are 92 counties in the state. Three counties—Huntington, LaPorte, and Spencer—were not heard from and consequently data from these counties are not here included. This is based on 89 counties.

[4]This study has to do only with schools under the direct supervision of the county superintendent and control of the township trustee. Schools controlled by local boards are not included.

TABLE 3

Minimum and Maximum Numbers of Schools, Range and Median Numbers

Type of School	Minimum in Any County	Maximum in Any County	Range in State	Median No. in State
All One-Teacher Schools	0	100	100	26
One-Teacher Consolidated	0	27	27	2
Two-Teacher Consolidated	0	13	13	2
Three-Teacher Consolidated	0	7	7	1
Four- (or more) Teacher Consolidated	0	33	33	7
All Schools	10	132	122	44
All Consolidated Schools	0	35	35	15

transportation and 124,027 pupils were transported.

The Possibilities of the Future

By way of conclusion it may be said without much if any contradiction that of the 2,725 one-teacher schools yet remaining in Indiana, fully one half are so situated that, with proper housing conditions, they could readily be consolidated. Of the one-, two-, three-teacher, and even larger, consolidated schools, many are not well located due principally to the township system of school control. There is need for renewed efforts, on the part of leaders in rural education in the state, looking toward further consolidation, not only with reference to the one-teacher schools but also with reference to the larger schools, many of which are already classed as consolidated schools. Some of the means at hand for carrying on such a program are:

1. Educational conferences, programs, and publicity. There should be at least annual regional meetings of all persons interested in rural education, and topics on each program should have to do with some phase of consolidation. Ideal plans of consolidation, typical consolidations, examples where consolidation could easily be effected, methods for local campaigns, factors which may contribute to consolidation, and comparisons of the results of educational achievement in various types of schools are topics which could well be discussed, under leadership of the state superintendent of public instruction, state school inspectors, and county superintendents. Bulletins should be issued, which set out the actual condition with reference to consolidation, and the ranking of the various counties. These would stimulate local pride in a better school program. The state office should provide data and publicity for use in the local counties.

Public Interest Necessary

2. The unit of school organization and the plan of county-school administration should be given serious study by all citizens of the state as well as schoolmen and politicians. Ideal consolidation is perhaps impossible with the present arbitrary divisions of communities in existence. Many one-teacher schools now exist because of false local pride. The proper unit would ultimately permit of proper location of school buildings in order to accommodate most advantageously the school population. Such

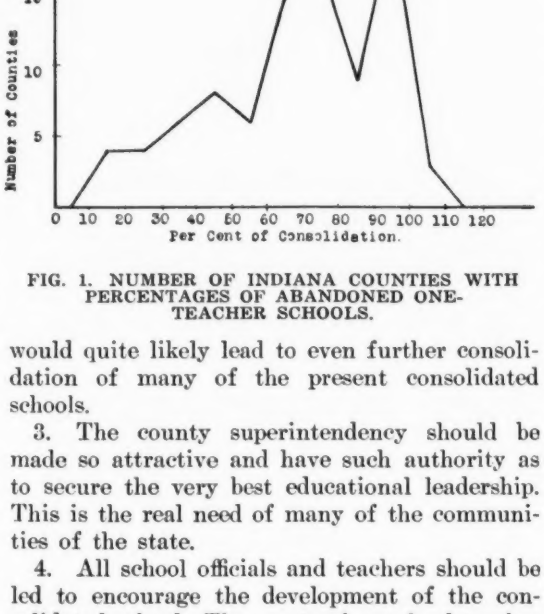


FIG. 1. NUMBER OF INDIANA COUNTIES WITH PERCENTAGES OF ABANDONED ONE-TEACHER SCHOOLS.

would quite likely lead to even further consolidation of many of the present consolidated schools.

3. The county superintendency should be made so attractive and have such authority as to secure the very best educational leadership. This is the real need of many of the communities of the state.

4. All school officials and teachers should be led to encourage the development of the consolidated school. The one-teacher school teacher should not be afraid of encouraging the abandonment of her school. Also, the consolidated school should be made so attractive in ability of faculty, in accommodations, activities, etc., as to be an actual drawing card. When the people of a district want their children to go to another and larger school, consolidation becomes easy. Hence, standards should be high with regard to above items.

5. The state should provide more help for the rural communities in the way of inspectors and supervisors, and assistance in schoolhouse planning. A wider use of the school-and-community survey is also of much importance. Studies of achievements are also very essential.

6. A close spirit of cooperation between the county superintendent and the state superintendent should be fostered. These two officials with proper professional-mindedness, high ideals, and proper cooperation on any given problem should be able to do much in bringing about results on any problem attacked, especially when each shall have been granted authority commensurate with his responsibility and his position in the educational world.

A Simple System of Budget Control

Arthur J. Peel

The principle of predetermining expenditure is becoming increasingly recognized in public-school administration. Sometimes this is provided for by the legislative body, then again it may be an unofficial budget drawn up by the superintendent on the basis of regular appropriations. In whatever form it functions, however, it becomes incumbent on the accounting officer to provide records and machinery which make effective the control which is the whole purpose of budgetary provisions and limitations.

The value of visualization of financial operations and their relation to other factors, has been illustrated many times in THE SCHOOL BOARD JOURNAL, but we are still far from exhausting its possibilities. There is a growing tendency on the part of school financial officers to reduce accounting and costing practices to a common expression, so simple that they carry a complete story to the layman as well as to the school executive skilled in the art of interpreting financial and cost statements. This is a healthy sign, and one to be encouraged. Where the good purpose exists, it naturally follows that this tendency will be manifest in the *methods* and *machinery* by which the finished and final statements will be developed.

Check With Budget Necessary

The control of expenditure by means of a predetermined standard, based on expectations or past experience, is one of the most important responsibilities devolving on the superintendent. This can be made irksome, time-consuming, and haphazard. In some offices which I have visited, a comparison of expenditures with the budget for any given period, means a small upheaval in the office and a temporary dislocation of ordered routine. Sometimes this is due to insufficient or poor records; more often it is due to failure on the part of the accounting officer to keep up to date.

While discussing this subject with a school superintendent at a state banquet some time ago, he made a remark which struck me as being worth noting and passing on to other superintendents who may be experiencing annoyance and trouble owing to the failure of the office force to furnish vital information, at any moment it is called for. He said that he has made it a practice to insist on certain information being placed on his desk *daily*. He admitted to me that he seldom has time to examine the statements or charts, every day, but he knows they are there, and are available at a moment's notice. By this means he has established a habit in his office of doing certain things daily, regardless of what may turn up out of the ordinary routine. This is good management, but it involves more than keeping *records* up to date, as a rule; it calls for a manifestation, or a *visible result* of promptness and regularity.

Nothing is so conducive to this end than is the preparation of simple charts which depict in graphic manner, the salient facts of financial progress. At the same time nothing is so satisfactory from the point of view of the busy executive who requires to be in touch with only the vital facts as they are developed day by day. As an illustration of this, let us examine the simple but very effective charted record shown here, and which covers "expenditure" and its relation to a budget.

Visualizing the Story

The items which I have used, together with the figures, are solely for the purpose of demonstration, and do not represent any actual condition. The preparation of the chart is very simple; the annual sum allotted for each object of expenditure covered by the budget, is divided into twelve equal parts and reapportioned over the twelve months covering the fiscal year. It will be noted that each month shows the accumulated sum which may be spent under the

(Continued on Page 148)

BUDGET & EXPENSE CHART

ITEMS OF EXPENDITURE	JAN.	FEB.	MAR.	APL	MAY	JUN	JUL	AUG.	SEP.	OCT	NOV	DEC
Admins: Salaries	600	1200	1800	2400	3000	3600	4200	4800	5400	6000	6600	7200
Clerical Salaries	350	700	1050	1400	1750	2100	2450	2800	3150	3500	3850	4200
Office Expense	100	200	300	400	500	600	700	800	900	1000	1100	1200
Printing	50	100	150	200	250	300	350	400	450	500	550	600
Stationery	25	50	75	100	125	150	175	200	225	250	275	300
Postage, Tel. & Tel.	10	20	30	40	50	60	70	80	90	100	110	120
Traveling Exp.	10	20	30	40	50	60	70	80	90	100	110	120
Supervision	2000	4000	6000	8000	10000	12000	14000	16000	18000	20000	22000	24000
Teachers' Salaries	12000	24000	36000	48000	60000	72000	84000	96000	108000	120000	132000	144000
School Supplies	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000
Textbooks	250	500	750	1000	1250	1500	1750	2000	2250	2500	2750	3000
Transp'n of Pupils	400	800	1200	1600	2000	2400	2800	3200	3600	4000	4400	4800

A.J.P.

SUGGESTION FOR A CHART FOR VISUALIZING BUDGET APPROPRIATIONS AND EXPENDITURES.

As is the Principal

R. C. Clark, Superintendent of Schools, Seymour, Conn.

"As is the principal, so is the school," is a trite saying among educators. And it is a rather strong statement, but it is certainly true that the principal may, and should be, a dynamic and vital force in his school. With a principal who lacks the power to properly organize and lead the activities of the school, the work is likely to be spotty, aimless, reactionary. The principal who has the power of leadership, who is motivated by a compelling desire to make a real contribution to the lives of the children under his care, who is adequately trained, and who has a broad vision of the social life of the school will, if given sufficient authority and responsibility, create a spirit and technic that will permeate the whole school and make it a factor of importance in the community.

Essential Qualities of the Principal

The first essential quality of a principal is moral character. It seems almost unnecessary to mention this, but it is fundamentally important. The principal is a shining target, and what may pass as a trivial weakness in others, in him is moral turpitude. I am thinking of one man who failed because he did not promptly pay his bills. Another was silly in his attitude toward girls. Another cheapened himself by slangy and near-profane language. All three were failures.

The school principal will do well to respect the moral standards of the community whether they are his or not. A personal experience may illustrate what I mean. As a student I went to a small town where I did not have to hold my car very close to the ground to learn that by the so-called better element, card playing was not considered proper. I have always been fond of card games but I did not play cards in that place. To have done so would have alienated some warm and strong supporters. Of course, this was twenty years ago and that particular condition would not come to many principals now. The point is that the support of the community is worth more than independence in unessential things.

As a usual thing the principal has troubles enough of his own without trying to reform the community. He should be on the side of the element which takes community problems seriously or, if their position seems untenable, he should avoid giving offense. As a boy I read that a Christian man should be gracefully yielding in nonessentials but firm as a rock in fundamentals. Such a man is the high-school principal. Grenfel told the superintendent at Dallas, "It is not a question of mere facts that children learn. They learn not what you tell them but what you are." In all the philosophy of education there is no doctrine so fundamental as that the person who leads little children should be of the very highest moral character.

Personality as an Essential

The second essential qualification of a school principal is personality. Hyde asks this question, "What is it, then, that makes one teacher popular, successful, wanted in a dozen places; and another equally well trained, and experienced a dismal failure where he is and wanted nowhere else?" He answers it with one word, "Personality." There is a personality that inspires confidence and wins friendship. This personality stood out in the late President Eliot when he said to an assistant professor who had received a call to go elsewhere, "I suppose you understand that your opposition to my policy will not in the slightest degree interfere with your promotion here."

The principal must be impersonally fair and personally interested in the welfare of all with whom he deals. Children must be to him more than things to be educated. They must be more than neurones and responses. They must be to him real live human beings with desires, weaknesses, virtues, and possibilities. Teachers are not viewed by the principal with personality as hired hands but as coworkers with ideas, limitations, ambitions, and ideals. It is his privilege to honor them and lead them in an enterprise in adding to the sum total of human knowledge and happiness. He gives credit for their contributions and helps them to overcome weaknesses. He delegates duties and authority and secures results. The one-man school is not so effective as it might be if the principal were of large enough personality to make it more of a cooperative affair.

Social Contacts Important

The personality of the principal should be large enough to assure an interest in the social, civic, and homelife about him. The man who is not larger than his school is not large enough for his schoolwork. Many problems are more easily met if the principal is known socially in the community. The homelife of the child has a real identity with the child's school problems. It is of real value to the school to be represented at the chamber of commerce. It is important that the community feel that the schoolman is one of it. From the community he gets his support in the great work he has undertaken to do.

Ask teachers the qualities a principal should possess and most of them will mention tact, justice, impartiality, or kindness first. Possibly they are right, but it must be real tact, not evasiveness. The principal must face issues squarely. There must be no question regarding his stand. He must play the game aboveboard. Real tact includes a good amount of downrightness. He must be just and impartial, but his justice must be tempered with mercy and understanding. Sometimes absolute impartiality is the most unfair thing in the world. He must be kind, but it must be remembered that the surgeon who cuts is more kind in so doing than he would be to allow the trouble to grow and cripple the patient. On the other hand, the good surgeon uses a scalpel, not a meat axe. I am convinced that the average high-school principal would profit by a certain amount of introspection and a studied effort to broaden and enrich his personality.

The Training of the Principal

The principal must be educated and trained. Most high-school principals are college graduates. Most grade-school principals are either college or normal-school graduates. Koos found that the "subject representation in the work taken in high school and college by the high-school principal shows a commendable spread over most of the academic range." I think we may say with some assurance that the principal, both high-school and grade, as a rule has a good knowledge of the subject matter taught in the schools.



The increasing number of principals who are supplementing their training by additional work during the year, or at summer school, is significant. Many feel that in order to do justice to the important position which they hold, or to secure promotion, they must supplement their education. Not satisfied to organize and administer their schools in the manner of their past experiences, they seek to know the methods which others have adopted and to understand the fundamental principles involved, to weigh them in the light of scientific knowledge, and adopt those which seem best. Not satisfied to construct a curriculum by the pastepot method, gathering scraps from the published curricula of other schools, they wish to know the underlying truths of psychology, sociology, and philosophy so that they may construct a curriculum which shall be a vital instrument contributing to the welfare of the individual and the group, actually functioning to broaden, enrich, and beautify the lives of the educated. Not satisfied to supervise in an aimless way he seeks to know the technic of supervision, the aims of instruction, and the foundations of method. To these ends he adds to his baccalaureate or normal education a course of training in educational administration, psychology, history, educational principles, philosophy, sociology, and technic. It is probably conservative to forecast that, in twenty years, the majority of principals in the high schools at least will have a master's degree based on professional study of education, in addition to their baccalaureate degree.

The Principal as Administrative Officer

The high-school principal is loyal. As administrative officer of the high school he may be called upon to enforce rules made by the board of education or the superintendent of schools. He may doubt the wisdom of some of these, but in loyalty to the institution, it is his function to enforce them. He should have much power and freedom to exercise initiative. The larger aims of the entire school system as outlined by the superintendent demand his loyal adherence. He is loyal to the pupils, protecting them from poor teaching and neglect. He is loyal to his teachers, seeing to it that they get full credit for faithful and intelligent work and that they are stimulated to constant improvement. He will strive to obtain for both teachers and pupils hygienic and advantageous working conditions and adequate modern equipment for their work. Above all, he is loyal to education. He knows the evil and misery that ignorance breeds. He knows the possibilities of the schools in helping shape the lives of the people. None are more keenly aware than he of a degree of failure to meet the possibilities, yet he is loyal to the institution for the contribution it is making and dedicates himself to the task of enhancing its service.

Business Matters and the Principal

The school principal is a business man. We often hear it said of a man that while he is a good teacher he has no head for business. This may, or may not, be true of teachers in general, but the principal must have business qualities. Attendance must be recorded and records kept by him or under his supervision. It is highly important that they be well kept. Textbooks must be at hand when needed. Apparatus must be bought with a full appreciation of its utility in proportion to its cost. Unnecessary duplications must be avoided. The principal must be prompt in keeping appointments. He must un-

derstand the value of desirable publicity and know how to use it effectively. The work of janitors and repairmen must be supervised. He must organize the machinery of routine so that each member of his working force gives the greatest possible service with the least possible friction. He must realize the importance of detail and attend to it with vigor or delegate it wisely. The public has invested a great deal of money in its schools. It is a task for the principal to see that it receives full value.

The principal is a disciplinarian. It is one thing to discipline a class of thirty. It is quite another to influence the discipline of the entire school. Most classroom cases should be handled by the classroom teacher. The most difficult are referred to the principal. Discipline to the good principal is largely preventative. He has a sympathetic understanding of adolescence. The pupil is led to feel a proprietary pride in his school. The sentiment of the school is against disorder. Rude and discourteous things are not good form; they are not being done. The real principal is not content with a lack of disorder; he seeks an active, live cooperation, on the part of the pupils. There must be a wholesome respect for authority.

The principal is primarily an educator and, in most instances, he must have the qualities of a supervisor of instruction. It is not easy to conceive a man who will have an equal knowledge of cooking, Virgil, and the social studies. Nor is this necessary. The principal does know the aims of education and the place these different studies have in the general scheme. It is his function to insist with tact and firmness that these subjects be taught in such a manner as to fulfill their purpose in the curriculum. He requires results and aids in securing them.

The Principal a Man of Many Sides

Such a man is the school principal, a man of many sides, a man of importance. The performance of the task he undertakes is fundamental in shaping our civilization. To the task he must bring native talent and training. He must undertake it with humility yet with courage to carry on, building on the splendid foundations his predecessors have laid, developing in the light of truth revealed by modern research. It is a job for a real man, a task that is a professional challenge to the red-blooded.

High-School Office Administration

G. L. Harris, Extension Instructor in Education, University of Chicago

I. Registration Procedure

The first day of school is the real test of the executive ability of the high-school principal. It will find the principal hurried, flustered, beset with a thousand and one worries, trying to be in a dozen places at once, trying to settle a dozen questions at once, or it will find him quietly and efficiently conducting a well-operating school, meeting problems, to be sure, but handling them with ease and definiteness because they are problems which have been anticipated and met in advance.

The ideal condition, and by no means an impossible ideal, is for the high school actually to operate on the first day of school. His own program should be in the hands of every student; class lists should be in the hands of teachers; classes or sections should be of the right size; every scheduled class should meet; and definite classwork should be carried on.

Of course, there will be questions to settle with some pupils and with some teachers. Naturally, too, there will be new students who are not familiar with the building and who must be guided to classrooms and study halls. But all these things can be handled quietly and without undue confusion, because they can be planned for in advance.

Seldom indeed is this ideal condition found, or even approached. Why this is so we shall not attempt to set forth within the limits of this article. Rather, we shall endeavor to show how this ideal condition may be best approached, and we shall do so by considering how it is being done most effectively in some of the representative high schools of the country.

Obviously we cannot set up a procedure which is uniformly applicable to every high school. No matter how perfect a routine may be in one situation, it will not operate with the same smoothness in another place. There are always local factors, peculiar to each community, which would render futile the attempt to adopt as a whole even the most successful procedure used in any other community.

One part of the procedure followed here, another part of the procedure followed there, combined with the best features of his own present procedure, should be the means of enabling the principal to work out a policy for his own school, and the principal should make changes in his school routine with determined deliberation. No new plan should be put into effect without detailed consideration. Every change should be carefully and patiently explained and discussed with both the student body and the faculty.

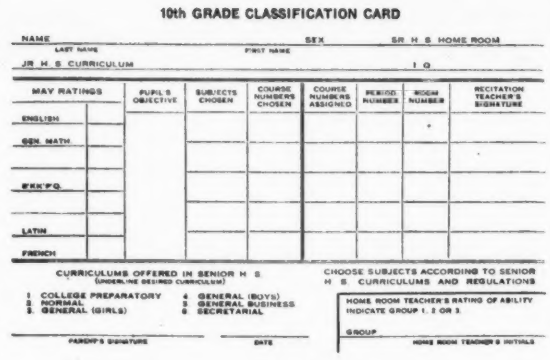
Nothing could be more unwise than for the principal to discard satisfactory methods in favor of his own pet schemes. Merely because he finds a certain procedure in operation when he first goes to a new school is no reason why he should condemn and discard that procedure. In fact, possibly the wisest thing a new principal can do is to follow the procedure left by his predecessor, wherever it is possible, until he has definitely planned a better procedure and has definitely won over his students and his faculty to the advantages of that procedure. If he does this, he builds permanently, and whether he is using his position as a very transitory stepping stone, or whether he is desirous of establishing himself permanently, he should try to make his organization of school procedure one that will be worth keeping.

Such an organization will be flexible. It will meet emergencies. It will not impose unfair restrictions on any individual student or teacher. It will be fair and considerate.

The procedures discussed here have been selected because they most nearly accomplish these things, and appear to contain suggestions of value to the principal. But however valuable they may seem, it should be emphasized again that none of them should be adopted hurriedly and without careful consideration of their effectiveness in meeting the registration problems of the principal's own school.

Advance Selection of Classes

It is generally agreed that the choice of subjects for the school year should be made well in advance of the opening day of school. In the Trenton, N. J., high school this is done during the first week in May, for the following September. Every student is given a copy of the list of courses and of the rules and regulations of the school. He is also given a grade classification card, such as the one shown here (Figure 1). The classification card varies somewhat for pupils of different grades. This card is for pupils who expect to enter the tenth grade in September. The pupil in conference with his homeroom teacher, fills out the first half


10th GRADE CLASSIFICATION CARD

NAME SEX SR. H. S. HOME ROOM
LAST NAME FIRST NAME
JR. H. S. CURRICULUM I. Q.

MAY RATINGS		PUPIL'S OBJECTIVE	SUBJECTS CHOSEN	COURSE NUMBERS CHOSEN	COURSE NUMBERS ASSIGNED	PERIOD NUMBER	ROOM NUMBER	RECITATION TEACHER'S SIGNATURE
ENGLISH								
GEN. MATH								
SCI. FIC.								
LATIN								
FRENCH								

CURRICULUMS OFFERED IN SENIOR H. S. (UNDERLINE DESIRED CURRICULUM)
1 COLLEGE PREPARATORY 4 GENERAL (BOYS)
2 NORMAL 5 GENERAL BUSINESS
3 GENERAL (GIRLS) 6 SECRETARIAL

CHOOSE SUBJECTS ACCORDING TO SENIOR H. S. CURRICULUMS AND REGULATIONS

HOME ROOM TEACHER'S RATING OF ABILITY
INDICATE GROUP 1, 2 OR 3.
GROUP

PARENT'S SIGNATURE DATE HOME ROOM TEACHER'S INITIALS

FIG. 1.
The left half of the card is filled out by the pupil and his homeroom teacher. The last four columns are filled out by the registration committee.

of the card. He then takes the card home and secures his parent's signature to it.

These cards are all in the principal's office not later than June 1. A forecast is then made of the recitation classes required, and a program of classes is made from that forecast. This program is copied on a large sheet of paper, approximately 36 by 132 inches, and is placed on the wall of the office. The pupils are then assigned to classes, and the large program sheet is used as a tally sheet. The committee in charge of the registration enters on the classification cards the course numbers assigned, the period numbers, and the room numbers.

After the close of school in June, the recitation teachers send to the office the names of pupils whose ratings have been changed in such a manner as to affect the schedule of recitations for the coming year. The classification cards for these pupils are then rechecked and the necessary changes are made.

The cards are next arranged into homeroom packs, and on the opening day of school in September they are given to the homeroom teachers. When a pupil reports to his homeroom at the beginning of the first day of school, he receives his classification card, which has now become his program card. He carries this program card with him to each class, as his certificate of entry. The teacher in each class checks the card against the official class list—which the office has placed in the teacher's hands—and signs his name on the line opposite his course.

The classification cards are returned to the office and filed temporarily in a vertical card file, thus furnishing the office with a schedule of every pupil in the school.

Permanent Program Cards

After the school has got under way and the necessary changes in programs have been effected, each pupil should fill out a permanent program card. This is generally done at about the third week of school.

The original classification cards are not really suitable for this purpose, because there are sure to be numerous changes in program during the first weeks of school. Even though a pupil has definitely chosen his program, and his advisor and parents have agreed with his choice, there are circumstances which justify changes after school opens. The registration procedure must not be so inflexible as to make it unpleasant for the pupil to change. Of course, it is justifiable for the principal and the faculty to try to prevent the necessity for such changes, but changes absolutely cannot be prevented and there is no use in trying to prevent them entirely.

Therefore, the permanent student directory is best compiled after these changes are made. We say student directory, because that is what the file of program cards should be. It is essential that there be a readily available file which will show at a glance exactly where every pupil is to be found at every hour in the day, and which will show how to reach the pupil at home in case he is absent from school.

(Concluded on Page 130)

Principles Governing Management and Accounting for the School Plant

Prof. Fred Engelhardt, University of Minnesota

(Concluded from August)

Accounting for Depreciation

It has been suggested that an accounting reserve for depreciation, obsolescence, and inadequacy can be of real service to management in protecting the resources of the school district and planning a sound financial policy in regard to property management. Proper accounting for depreciation, inadequacy, and obsolescence for a period of years will provide factual data for establishing satisfactory rates and estimates, and provide a basis for determining better standards of practice.

The efficiency of property management can be checked against the standards so established. Financial statements, clearly setting forth these facts, required as a part of the annual reports, will reveal the policies of the administration relative to property management. Under these circumstances, the necessary maintenance and replacements cannot be deliberately deferred to the future school boards without the facts being known. Such reports will point out how much of the total plant cost is charged to each year and whether or not the administration is preserving the property and maintaining the plant for continuous, efficient, useful service.

Property accounts can be arranged to provide the facts necessary for determining, within definite limits of accuracy, the least amount that can be expended each year to maintain the property for efficient service. This amount would represent the year's share in the total cost for maintenance, replacement, and depreciation. The years in which the school budget reflected this amount would represent the periods during which the annual burden for these items of costs were being fully carried. When the reports and accounts show that this is not the case the obligations are not being met, and the burden is being deferred. On reviewing the reports, those responsible for financing the schools, as well as the public, will be well aware of existing conditions. Heavy burdens for replacements and maintenance cannot be deliberately and unknowingly deferred as responsibilities and burdens for the future to carry.

The accounts prepared so that they relate to property management will reflect not only the current expenditures necessary for replacements, maintenance, and depreciation, but also will show those facts the executive needs for determining how much of these expenditures should be provided out of current revenue and the amount that legitimately can be raised through long-term borrowing or bond issues. The facts might be presented in the budget as follows:

Items in Tentative Budget	Amount
Annual maintenance estimate	$150,000
Annual replacement estimate (Capital Outlay)	350,000
Total maintenance and replacement estimate	500,000
Annual total requirement for maintenance, depreciation, obsolescence, as shown by accounts	300,000

The budget should reflect an amount equal to $300,000 to be paid from current revenue for maintenance and capital outlays. This being the amount, as shown by the accounts, that each year must pay if the burden is to be equally distributed. The $200,000 for capital outlay should be financed through bond issues. The amount of the $300,000 actually expended becomes a true cost to the community for school plant that year. Each of these items would be detailed in the budget.

If the building or plant program is properly planned for and if each year is required to pay its proportionate share of the program, the cost of capital outlay for plant additions can be likewise readily determined. Accounting practice may provide estimates for yearly expenditures necessary to meet the costs of debt service. The plan will be similar to that suggested above. These estimates would suggest the least amount that can be charged for outlays for any one normal year if the cost is to be equally distributed. Yearly costs thus estimated should be reflected in the budget. Assuming the same situation as above, the estimates would be recorded in the budget somewhat as follows:

Tentative Budget	Amount
Estimated capital outlay for replacements	$ 200,000
Estimated capital outlay for new buildings and grounds	800,000
Total outlay for year	$1,000,000
Annual total allotment for debt service (Requirement for the redemption of bonds and interest charge as shown by accounts)	60,000

This sum of $60,000 becomes the annual cost to the community for the normal capital outlay financed through long-term borrowing. It is to be observed that this is the amount, as shown by accounts, that should be paid currently each year if the burden is to be equally distributed. The expenditure of this item provides for payments into the sinking fund, interest, and principal as it may fall due during the year under consideration.

The above outline provides a suggestive plan for coordinating the educational program, the plant program, and the plan to finance those programs. With such a plan, management can act intelligently and wisely. The total yearly costs of education can be more accurately determined. The public can be now accurately informed as to what it is spending. Future needs can be anticipated, and the resources of the district can be properly preserved, and finances maintained in good condition.

Insurance

Property is subject to many hazards and risks, such as fire, wind, storm, theft, and other numerous causes. Property value may be completely destroyed by such accidents, often causing great hardships on the schools. This is illustrated by the unfortunate casualty resulting from the earthquake (summer 1925) in Montana.[22] In this case many school buildings were destroyed. The communities were already burdened to the limit with school debt and had no immediate means for replacing the destroyed property. Evidently no protection for these schools against these casualties had been provided. The accident that may befall a community is again illustrated by the horrible loss due to the burning of Babb Switch rural school[23] in Oklahoma on Christmas Eve, 1924. In this case over thirty lives were lost.

The application of the principles of selection, construction, operation, and maintenance of property reduces the risks that the school plant is subjected to. As in the case of depreciation, obsolescence, and inadequacy, school management can protect property against a number of the risks enumerated above. Property may be protected against these risks in three ways. The school authorities may actually set up a cash reserve. The school board may pay for this protection by paying private enterprises to establish such a reserve, that is, by insuring the property. Then, again, various combinations of these procedures may be used. The objections against sinking funds and depreciation reserves holds for local insurance reserves. It must still be proved, except in the case of large cities under best educational management, that setting up insurance reserves is sound financial practice for public-school systems to follow.

Insurable Value of Plant

The acceptable value of insuring school property is its sound value[24] or the present replacement value, less depreciation. This replacement value is usually determined by appraisal. The cost of reproduction at the time of appraisal is calculated and is then decreased by the accumulated depreciation for the period in question. The lack of adequate standards of depreciation for school building and their equipments, result in great variations in appraisal value. This variation may be from ten to fifteen per cent, depending upon the appraising authority. The reproduction cost is frequently made by using in the calculation present-day costs of building material and labor. In estimating this reproduction cost, consideration must be given to the actual condition of the building, its adaptability to school needs, and its fitness for use. Appraisal of school property requires engineering skill as well as a knowledge of school-building standards and the service values of the school plant.

In Table V the cost value of the buildings in the city of Superior, Wisconsin, are recorded.[25] The appraisal values of these properties are also tabulated. These data are presented here to show the relationship between appraisal values and cost values.

Melchior found, in his study of insurance of school property in New York state, that "in 66 per cent of school districts, school authorities alone appraised the buildings." In most of the school systems little if any attention was given to appraisal. An added advantage of an appraisal was pointed out to be the beneficial result of the inspection. Three years' periods between appraisals seems to be the more common practice in New York state.

The Amount of Insurance

The following summary represents some of the more important findings of Melchior[26] regarding the amounts of insurance carried on school buildings in New York state:

"Individual school districts within a certain class vary extremely in the ratio of insurance to value.

"The median ration of insurance carried to value, for the state, is about 60 per cent.

[22] School Board Journal. Page 130, October, 1925.
[23] Minneapolis Morning Tribune. December 26, 1924.
[24] Insuring Public-School Property. Melchoir. Teachers College Publication. N. Y. City.
[25] Superior Survey. Fred Engelhardt.
[26] Insuring Public-School Property. Wm. T. Melchior, Teachers College, New York City, 1925, pp. 175-176.

TABLE V
Appraisal of School Buildings, 1914 and 1920, Superior, Wisconsin

Building	Original Cost 1914	Cost of Reproduction in 1914	Present or Insurable Value in 1914	Cost of Reproduction in 1920	Present or Insurable Value in 1920
1.	$ 75,200	$106,800	$ 86,400	$195,000	$150,000
2.	41,600	57,600	47,300	105,000	81,000
3.	105,000	119,500	108,800	215,000	185,000
4.	261,000	261,000	255,000	265,000	430,000
5.	87,900	112,200	94,500	205,000	163,000
6.	60,600	79,100	63,700	145,000	112,000
7.	100,400	121,700	102,600	220,000	174,000
8.	13,300	15,000	13,500	135,000	129,000
9.	57,100	75,000	61,400	135,000	108,000
10.	42,250	54,900	45,500	100,000	78,000

TABLE VII
Contrasting Estimated School-Building Values with School-Building Services, Superior, Wisconsin

School	Insurable Value 1920	Cost Value 1920	Estimated Value Comptroller's Report, 1924	Depreciated Value 1920	Building Score 1925
Blaine	$150,000	$ 73,692	$ 96,141	$39,794	362
Bryant	81,000	45,332	48,575	26,293	502
Carpenter	185,000	113,000	132,000	67,800	485
Cooper	163,000	93,385	101,345	52,296	425
Dewey	112,000	61,000	83,834	30,500	370
Erickson	174,000	91,666	130,757	53,166	394
Franklin	129,000	88,983	89,900	72,974	589
Howe	108,000	59,618	78,000	32,194	400
Lincoln	78,000	44,442	47,250	26,665	511

"The new and better types of buildings are insured at comparatively low ratio.

"Fireproof buildings are insured at a far lower ratio than other types."

The following examples illustrate the amount of insurance carried by two different school organization, in one case a city of 40,000 and the other a village of 1,500. The following example is taken from the Crystal Lake Survey.[27]

Estimated Value of School Building $50,000	Annual Current Expenditures 1924-25 $33,000		Total Insurance Carried $75,000	
Insurance Carried		Amount	Yearly Cost	Yearly Rate
Building (Fire)		$50,000	$266.67	$0.64
Contents of Building (Fire)		5,000	37.17	0.89
Building (Tornado)		17,000	28.33	0.50
Contents of Building (Tornado)		3,000	5.00	0.50
		$75,000	$337.17	

In this case one per cent of the total current expenditure is paid out annually for insurance.

Table VI shows the amount of insurance carried on the school plant in Superior, Wisconsin. In this case the property is insured on the average of 65.6 per cent of its cost value. This insurance costs approximately $5,947 per annum, or a little less than one per cent of the annual current expenditures.

There are many factors involved in determining how best to administer insurance. Local conditions often create many petty situations that annoy both the school board and the superintendent. The outcome of such conditions frequently creates an unnecessary annual insurance burden.

TABLE VI
Insurance Carried on School Buildings, 1925, Superior, Wisconsin

Building	Original Cost	Insurance Carried	Per Cent of Cost
1.	$ 73,692	$ 91,000	123.5
2.	135,332	50,000	36.9
3.	113,000	114,000	100.1
4.	260,000	269,000	103.5
5.	93,385	100,000	107.1
6.	61,000	67,500	110.7
7.	240,000	50,000	20.8
8.	91,666	108,500	118.4
9.	88,983	67,000	75.3
10.	3,173	2,500	78.8
11.	59,618	65,500	109.9
12.	124,442	48,000	38.6
13.	300,000	50,000	16.7
14.	16,079	6,000	37.3
Total	$1,660,370	$1,089,000	65.6

The contrast between property values is shown in Table VII. Which of these values has real significance will depend upon the purpose considered. The relationship existing between the insurable values, depreciated value, and the service value, expressed by the building score, is rather interesting. This is especially true if one considers the Blaine school, for example. The significance of these values is still to be determined.

School-Plant Costs

In order to consider fully the principles of property accounting, it is important to examine into the elements that comprise the cost of education. It is trite to say that the ultimate value of accounting to management is the usable statistical data or cost reports that are made available for analysis and consideration. Even in a small school organization where the executive is in close touch with all the details of the system, reliable and accurate accounting statistics are an invaluable aid in keeping him posted and in touch with details. There is no other way to prove that the schools are well managed, than by means of factual evidence. The school executive must determine the accounts to be kept, for they are determined largely by the reports desired. The reports to be asked for can be readily made if the accounting classification is consistent with the principles adopted for the management of the plant.

The classification of expenditures in most public-school statistical reports now in general use, differentiate between current expenditures, capital outlay, and debt service. This classification has resulted in a similar organization of accounting. This procedure was originally determined in order to secure some adequate comparable measure of current educational costs. The differentiation or classification was a matter of expediency rather than principle. It has been the practice to determine unit educational costs from current expenditures. With the advancement in public-school accounting the above procedure can be modified to the advantage of public-school accounting and property management. The current practice of separating current expenditures from total expenditures is illustrated in the following classifications.[28]

I. Current Expenses

1. General Control:
   a. Business Control
   b. Educational Control
2. Instructional Service:
   a. Supervisors
   b. Principals
   c. Total Supervision
   d. Salaries of Teachers
   e. Textbooks
   f. Other Instructional Service
3. Operation of Plant:
   a. Wages of Janitors and Other Employees
   b. Fuel
   c. Other Expenses of Operation
4. Maintenance of Plant
5. Fixed Charges:
   a. Pensions
   b. Insurance
   c. Other Fixed Charges.
6. Auxiliary Agencies:
   a. Libraries
   b. Health Service
   c. Other Auxiliary Agencies

II. Other Than Current Expenses

7. Debt Service:
   a. Payment of Bonds, Direct
   b. Payment of Bonds, Sinking Fund
   c. Payment of Interest
   d. Other Debt Service
8. Capital Outlay:
   a. Land
   b. New Buildings
   c. Old Buildings

Cost of Plant Service

The expenses that can be charged against plant service, are those included in the payments for maintenance, operation, insurance, depreciation, and interest. They are all directly or indirectly a part of the total current cost of providing educational service in a public-school system. It is interesting to note that insurance (under fixed charges) and depreciation (in part, through minor replacements charged to maintenance) are accounted for and included under current expenditures.

Interest payments in any form are not included in current expenditures in this classification. Temporary loans are usually made to meet current liabilities. The cost of the use of such borrowed money is without question a current expenditure. Purchasing protection against risk through insuring the school plant, and payments made for the use of capital to be used for the construction of buildings are quite similar in a number of aspects. Payments made for insurance protection when bought and paid for in advance are usually prorated over this period. Payments made for money borrowed for a period of years should likewise be prorated so that each year will carry its fair share of this expenditure.

The part of the total capital cost (monies expended in providing the elements of the plant) which can be properly charged each year, should likewise be included in current expenditures. The payments made for all these elements must be considered in their relationship to other current expenditures if each year is to bear its fair share of the cost burden of education. School accounting must provide an acceptable means of prorating to each year a proportionate share of the total capital-cost burden.

If property is to be adequately managed, if the financial credit of the community is not to be impaired, and if the current educational program is to be properly financed, then accounting must provide for a proper and equitable annual distribution of plant cost. This cost must include the expenditures made in providing the plant, as well as those paid for keeping the plant in condition for efficient service. The accounting procedures necessary to account for property in this manner may appear at first to be rather complicated. Irrespective of this it is still a function of public-school management to develop a procedure that will bring about these desired results.

TO WHAT EXTENT SHALL SCHOOL BOARDS LISTEN TO POPULAR CLAMOR?

Booker T. Washington, in his autobiography, tells a story that illustrates the idea of popular education held by some people. A colored youth had completed a course of training for the profession. Upon presenting his application for a teaching position to the directors of a small colored school, he was asked by a member of the board what view he held with regard to the shape of the earth. Somewhat surprised at such a question he answered rather promptly that it was the shape of a sphere, or in other words, round. Thereupon the board member replied without hesitation that his application would not be considered. Naturally enough, of course, the youth wanted to know the relation between his ideas of the shape of the earth and his fitness or lack of fitness for the teaching place.

"Well," the board member began, in the local dialect which we shall not attempt to imitate here, "there was a good deal of grumbling last year in this district because the teacher taught the children that the earth is round, and I don't believe anyone who teaches such stuff can satisfy the people. We, the people of this district, don't believe any such foolishness and we don't want it taught to our children."

But the prospective teacher didn't intend to allow such a minor matter as that to stand between him and the coveted position. So after a moment's deliberation, he said, in effect, that this need not stand in the way. If the people of this district believed that the earth is flat, flat it is so far as he was concerned, and as such it would be taught. He believed that in rendering service to the public, that a public official should yield his own personal sentiments to that of the majority of the people. He was promptly employed.

This is a representative form of government. We elect certain individuals to represent us in our county, our state, and our national affairs. Our laws are made by representatives of the people; they are enforced and interpreted by representatives of the people. These representatives, theoretically at least, are selected from the cream of our citizenry, and are given broad discretionary powers in conducting the affairs of the particular office to which they are attached. In other words men of sound judgment are selected who are capable of weighing matters of some moment and acting upon them in a creditable manner.

(Continued on Page 150)

[27] Crystal Lake, Minn., Survey. Fred Engelhardt, University of Minnesota.

[28] McGaughy, J. R. The Superintendent's Analysis of School Finance—Teachers College Record—April, 1925.

School Accounting in 115 Cities Under 25,000 Population

S. O. Rorem, Superintendent of Schools, Lebanon, Pa.

School accounts are poorly kept. This announcement by five investigators in school finance quoted later in this article, represents their view of the situation during the last twelve years. The occasional news item of a shortage in school accounts due to carelessness seems to verify this fact because subsequent audits usually report that the money is at hand. Fraud is seldom the cause of shortages. Inaccurate and careless records are usually the cause. On the other hand, millions of dollars, wasted annually by school systems in smaller cities of the nation, slip away because officials do not read and understand the warnings which their accounts can offer them each year.

Apparently, these expense records, in many small cities, are used for the purpose of showing that receipts and expenditures strike a balance, as one writer states below. The accounting system in too many cities under 25,000 consists of a treasurer's report showing the amount received, expended, and on hand in various funds, plus the stubs of a checkbook. The constructive or diagnostic use of accounting is infrequently met—that of comparison with other *cities,* comparison with other years in the same city, computation of *costs* per child, per room, per building, per subject, etc., for detailed comparison.

Many excuses can be given to justify this neglect of cost comparisons, but the losses and wastes occur meanwhile. To the writer's personal knowledge one city permitted several thousands of dollars to slip away through a low rate of tuition, because the new method of computing instruction cost per child had not been employed after a favorable change in the state law. Good accounting would have revealed the cost and the loss could have been averted.

Englehardt[1] shows one case in Pennsylvania in which two cities of five thousand population and of similar location were using $88,000 and $124,000 respectively for the general control of their schools.

What Accounting Investigators Say

The investigators mentioned above will be quoted briefly in order to introduce the results found by the writer in 121 cities of the United States.

The general situation as found by them is expressed by the following citations:

1. J. Howard Hutchinson,[2] in 1914, stated that he found "incomplete data, different methods of distributing expenditures with no indication of the methods or of the warrants for their use, and found misplacement or previous destruction of data."

2. George M. Baker,[3] in 1917, discussing financial practices in cities and towns below 25,000 said that "to anyone at all familiar with school accounting and reporting, it is a well-known fact that here is the weakest part of our school system, as a rule." "Cities and towns below 25,000 generally do not, and often cannot, employ a competent business agent."

3. Deffenbaugh[4] found that little attention is given to fiscal accounting in smaller cities. He stated the condition in this manner: "Bills are paid and the secretary of the school board makes no classification of expenditures for fuel, light, janitor supplies, pupil supplies, and other items; so at the close of the school year it is a difficult matter for him to make fiscal reports called for by the state department of public instruction and of the United States bureau of education. As an aid in the administration of schools, his system is practically worthless."

4. Russell, in preparing the eighth volume of the Finance Inquiry publications, on "Financeing Education in Iowa,"[5] found difficulty in getting financial data from cities and towns. He states that absolutely accurate accounting information could have been secured only for the year or two just past, and then only by personal visitation.

In a study made by him in Iowa in 1920 he stated that there is almost no uniformity in the system of accounting in use in the schools of the cities of Iowa.

5. In 1924 Nelson B. Henry[6] found much the same situation in twelve Illinois cities that Hutchinson had found in the eastern cities ten years before. "Ignorance or disregard for the value of precise information concerning school expenditures resulted in worthless records," he said. He found that "the form in which the records are kept frequently has been settled in terms of the reports to be made and the training or personal interest of some *individual,* rather than in terms of the detailed scheme of organization of the school system and the use that may be made of the results of accounting in promoting the efficiency and economy of the educational and business administration of the schools."

Data From 24 States

Such statements as these led the writer in 1925 to investigate what is being done with accounts in cities having a population between 2,500 and 25,000. Brevity will require the omission of the methods by which data was collected. It may suffice to say that 115 cities in 24 states contributed to the data, and of the detailed presentation of facts at hand. The results will be presented under four headings:

I. The accounting official: his title, his training, his remuneration.

II. Accounting systems used in these cities and states.

III. Classification of expenditures as shown in financial statements and annual reports of some of these cities.

IV. The attitude of these cities toward school accounting.

Unit I. As mentioned above Unit I will deal with the official who keeps the record of receipts and expenditures, gives the data as reported concerning his title, his qualifications for the work, and his compensation.



The Official's Title and Qualifications

The official is actually "Secretary of the Board" in 111 out of the total 115 cities. However, in 28 of these this official is secretary to the superintendent of schools, in 11 he is secretary to board and to superintendent, in 7 he is named a clerk-treasurer, in 6 he is named special bookkeeper, and in 4 he is the superintendent himself.

The indication of general practice is that the board of education selects a representative to act as its secretary and to keep a record of receipts and disbursements of the school system, or it names the superintendent of schools as that representative, allowing him authority to delegate the actual recording labor.

Seventy-eight of these cities reported that the accounting official has as much preparation as that of a bookkeeping course. Of these officials 9 are accountants. However, 24 other officials reported that they "picked up" their qualifications.

In matter of training, this accounting official usually has a kind of preparation equivalent to a bookkeeping course of high-school or business-college type; if not, he has some qualification of present position or of experience which has been accepted by the board.

Whether this bookkeeping training is adequate or inadequate to manage the accounts of a city which spends $28,000 or $431,000[7] annually, it is likely that such preparation is sufficient to enable keeping the books in balance and taking off monthly reports or annual financial statements. Henry[8] reports that accounting seldom goes beyond this point in cities whose accounts he studied.

Although the data show an apparently low standard of qualification in many of these cities, some active influences are gradually improving standards of accounting in many other places. Some cities make a practice of having the accounting records audited annually by a certified public accountant, while others[9] have invited accounting experts to teach them accounting practice and to establish new accounting systems for them.

The Accountant's Remuneration

Twenty-four hundred dollars is the highest salary reported for full-time accounting. Of 87 cities which gave data on remuneration, 42 reported salaries of $1,000 or more and 33 reported salaries of $500 or less, leaving 13 salaries between $500 and $1,000. The data furnished by 87 cities are scarcely specific enough for the exact purpose of revealing remuneration, because the reports made no distinct computation of the proper portion of a secretary's time or of the salary to be separated for accounting alone.

The remuneration for this specific service is low, because the fractional part of the official's time required for actual accounting work ranges from one tenth to full time with an average of about one fourth. This seems to be due to the meager demands made upon the accounting records by the board of education for determining policies of administration, and probably also to the comparatively small number of financial transactions which need be recorded in cities having a population of less than 25,000.

Unit II. All cities were asked "what system of bookkeeping is used"? Forty-nine cities in 11 states claimed to be using "state systems," and 35 others gave a list of 19 different names

[1]Englehardt, "An Accounting System for Smaller Cities." *American School Board Journal,* 65:44-47.
[2]Hutchinson, "School Costs and School Accounting," p. 2, Teachers' College Contributions, No. 62. 1914.
[3]Baker, "Financial Practices in Cities and Towns Below 25,000," *American School Board Journal,* 54:25-27.
[4]Deffenbaugh, "Administration of Schools in Smaller Cities," p. 67.
[5]Russell, "Financing Education in Iowa," p. 167, Vol. "Finance Inquiry Publications," Macmillan, 1925.
[6]Henry, "A Study of Public School Costs in Illinois Cities," p. 9, Vol. "Finance Inquiry Publications," Macmillan, 1925.
[7]High and low totals shown in twenty-five financial statements.
[8]Henry, Nelson B., "A Study of School Costs in Illinois Cities." p. 8, Vol. "Finance Inquiry Publications." Macmillan, 1925.
[9]Winnetka and Glencoe, Illinois.

for their accounting systems. This varied list does not meet discussion here.

State Accounting Systems

A test of the state system claims revealed 7 state systems actually in operation. A noteworthy fact is that the development has been recent: Ohio's system was adopted in 1925; Indiana's and Michigan's in 1924; New Jersey's revision in 1924; Arizona's in 1923; Pennsylvania's in 1920; New York's in 1916; and New Jersey's first system in 1913. Claims by cities in Illinois, Kentucky, and Washington were found to be based upon a treasurer's distribution of expenditures; the Massachusetts plan could not be verified.

In referring to these systems it may be worth while to state that these seven states have specific systems which they recommend or require. New York, New Jersey, Ohio, and Indiana compel the use of their systems. Michigan, Pennsylvania, and Arizona offer their systems as the best means of fulfilling ultimate goals in reporting and in usefulness of financial data. Whatever the specific variations in these systems may be, all are built around the general plan of the annual report to the United States Bureau of Education. However, some have to vary in a few particulars to conform to state laws regarding various funds which must be maintained in the state reports.

Two features make some systems almost error-proof: (1) A book or sheet of instructions[10] explains general disbursement division, as administration, instruction, coordinate activities, auxiliary agencies, operation of school plant, fixed charges, maintenance of plant, capital outlay, debt service, and gives directions for the classification of all items of expenditure under these general headings.

(2) Two lists[11] of items classified as supplies and as equipment are furnished to avoid the confusion between them.

Uniform forms are prescribed by the state department of education of several states upon which the school accounts may be kept throughout the year. Blanks for orders, requisitions, warrants in triplicate, claim docket, payroll blank, etc., are furnished by some states.

Classification and Analysis of Accounts

Unit III. Classification of Accounts as presented in financial statements from some of the cities of the United States reveals a reasonably sound condition. However, only 42 cities offered such statements and only 25 of the 42 showed enough evidence of orderly arrangement for analyses and tabulation.

In justification of the 73 cities which did not send a statement it may be assumed they had no copy of their statement at hand or time to make one, although its quality may have been the equal or superior of those presented.

Dissection of these reports into items of classification made possible a comparison with the organization of the United States Bureau of Education blank for annual financial reports of public schools. A detailed outline was made of the entire form for the purpose of checking each of the 25 financial reports against it. This outline is composed of ten parts. The first form as shown in table comprises the general disbursement divisions represented by the Roman numerals I to IX as shown in the blank of the bureau of education. It shows the frequency in which the general divisions are recognized in the reports. These divisions are as follows: I. Administration; II. Instruction; III. Coordinate Activities; IV. Auxiliary Agencies; V. Operation of School Plant; VI. Fixed Charges; VII. Maintenance of Plant; VIII. Capital Outlay; IX Debt Service. This form is presented as Table I. The next nine parts or forms are concerned with the frequency distribution of items which belong under headings I to IX consecutively.

[10]All state systems supply this.
[11]New York, Pennsylvania, Indiana only.

Some Documents Incomplete

In the distribution of these major headings, instruction and operation of school plant were the only ones mentioned by all 25 cities. Administration is omitted by one report and maintenance of school plant is omitted by one. It is a noteworthy fact that these omissions occur in the reports of cities over 10,000. Likewise, the three omissions of auxiliary agencies and the three of capital outlay are due to neglect in cities of the same population group. Debt service and fixed charges are mentioned by only 13 cities, and coordinate activities by only 7.

In the detailed summaries of the 25 reports, some expenditure titles were found to vary from the expenditure titles given in the United States bureau of education form. For example, "compulsory attendance" was listed by 13 cities under administration, although belonging to "coordinate activities" as in the bureau of education form.

In dealing with the first of the nine general headings, (See Table I) administration, formerly called general control, the only items mentioned by as many as half of the 25 financial statements were: (1) secretary's office, salaries; (2) superintendent of schools, salaries; (3) secretary's office, other expenses; (4) superintendent of schools, other expenses; and (5) administration of the census. The low frequency of the other items may be attributed to many causes, the principal one probably being that the items which do not run into large sums are lumped together in the items of "other expense."

TABLE I
Frequencies With Which the General Disbursement Headings of the Bureau-of-Education Reports Are Used in the Financial Reports of Twenty-five Cities

Distribution Heading	Total Number	Under 10,000	Over 10,000
I. Administration	24	8	16
II. Instruction	25	8	17
III. Coordinate Activities	7	3	4
IV. Auxiliary Agencies	22	8	14
V. Operation of Plant	25	8	17
VI. Fixed Charges	13	5	8
VII. Maintenance of Plant	24	8	16
VIII. Capital Outlay	22	8	14
IX. Debt Service	13	5	8

Auxiliary Agencies Confused

The following will further reveal the miscellaneous classifications used in these financial reports. *Auxiliary Agencies,* (See Table II), as distinguished in items selected by the bureau of education, were found under many sorts of classification, as under instruction, operation, or maintenance. Even when they were all brought together into the one table, they made a spare array of items. The scattering classification of these items indicates the lack of uniformity in accounting practice, even among the cities whose financial statements were taken as the best examples. Some reports had placed transportation of children as an instructional expense, and some placed graduation expenses and commencement exercises in various divisions. Into the item entitled "other auxiliary agencies" the reports seem to have dumped a great number of bothersome combinations of items, for 18 of the cities which mentioned auxiliary agencies at all, made a contribution there.

TABLE II
Frequency Compilation of Auxiliary Agencies Items in the Financial Reports of Twenty-five Cities

Auxiliary Agencies	Total Number	Under 10,000	Over 10,000
Libraries (not books)	18	6	12
Transportation of Children	9	4	5
Institutional Care	2	0	2
Public Lunches	6	2	4
Adult Lectures	8	4	4
Commencement	8	4	4
Community Centers	0	0	0
Playgrounds	9	3	6
School Gardens	1	0	1
School Savings Banks	0	0	0
Tuition Paid Out	4	2	2
Other Auxiliary Agencies	18	6	12
Total Auxiliary Agencies	22	7	15

The *fixed charges* division, as well as that of coordinate activities, does not seem to be well understood. There is one difference: Fixed charges items seem not to occur frequently in cities under 25,000 if these reports may be accepted as typical; coordinate-activity items do occur, but they are charged to other divisions.

Of 21 references to insurance, ten were entered outside a *fixed charges* division, because only 11 of the reports recognized that major classification as shown in Table III. The frequency of other fixed-charges items in the reports was very low, the highest number of mentions being for pensions, 9; the next highest number of mentions being 6 each for rents and payments of orders.

TABLE III
Frequency Compilation of Items Relating to Fixed Charges in the Financial Reports of Twenty-five Cities

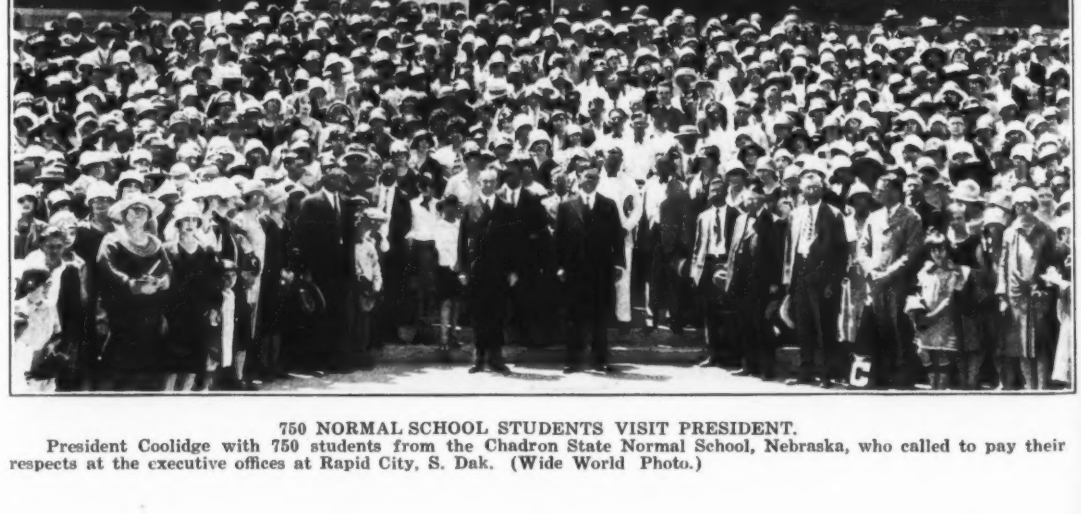
Fixed Charges	Total Number	Under 10,000	Over 10,000
Pensions	9	4	5
Rent	6	2	4
Insurance	21	7	13 *1
Taxes	4	0	3 *1
Compensation Law	2	0	2
Payment of Orders	6	3	3
Other Fixed Charges	2	1	1
Total Fixed Charges	11	4	7

*Starred items were combined with some other item.

Eleven Statements Unorganized

These distributions, as were mentioned above, deal with only 25 of the 42 reports reviewed by by the writer. The other 17 were not well enough organized for such compilation. Out of that leftover group of 17, the writer selected for analysis 11 which seemed to give the most heterogeneous collection of classifications, items, and combinations.

A count of the whole number of items and combinations presented in these 11 reports shows that 30 different items had been listed under administration, 51 under instruction, 6 under coordinate activities, 10 under auxiliary agencies, 26 under operation of school plant, 20 under maintenance of school plant, 4 under fixed charges, 8 under capital outlay, and 11



750 NORMAL SCHOOL STUDENTS VISIT PRESIDENT.
President Coolidge with 750 students from the Chadron State Normal School, Nebraska, who called to pay their respects at the executive offices at Rapid City, S. Dak. (Wide World Photo.)

under debt service. Two other items frequently mentioned were the miscellaneous account and the unclassified account. These occasionally included large sums of money.

Such financial reports seem to show the truth of the statement made by N. B. Henry in his study of Illinois cities, that secretaries in charge of books of the school district, enter expenditure items into whatever classifications seem to suit their notion or immediate purpose. The fact that out of 46 entries in 11 financial reports there are thirty separate groupings, most of them unauthorized by the form of the bureau of education, gives support to critical observations such as the investigators were disposed to make.

Attitude Toward Accounting

Unit IV. The attitude toward accounting seems acquiescent rather than aggressive. Seventy-nine cities reported that they follow the expenditure report forms of the bureau of education in their process of accounting.

The fact that more than 75 per cent of the cities are following the leadership of the bureau of education indicates a desirability or advantage in doing so. The similarity of the reports required by the department of public instruction in each commonwealth to the items of the federal form probably is a factor in the popularity of the classification of the bureau of education. Freedom from difficulty in making the state and federal reports seems to accompany the adoption of the federal classifications of expenditures in the accounting system of the various cities. This conclusion was supported by an inquiry relating to "difficulty" in making out the state and federal reports. The reply showed that approximately the same number of cities which follow the forms of the bureau of education had little difficulty in making out reports. Others reported serious complications.

The attitude toward accounting was generalized further from the conformity of cities in performing specific accounting practices of general value. Two practices, which concern only the local demand for conformity, will indicate what these cities do for themselves. These are the monthly report, and annual inventory. Sixty-six cities, slightly more than half of the 115 cities, make a monthly financial statement to the local board of education. Sixty-six make an annual inventory and annual revaluation of school property.

Use of Unit Costs

The data show further, that the use of school unit costs for comparison is not general. The 115 cities gave a report of 50 per cent in computation of teacher cost per pupil and of 70 per cent in total expense per pupil, 45 per cent for supervision cost and for maintenance cost per pupil. Subject cost was computed by only 17 cities according to the report. Thirty-eight cities make comparisons of their unit costs with other cities of similar size. Thirty cities know and compute their capital investment per pupil annually.

The items selected to represent cost unit above, bear no final significance among the standard unit costs, so far as the writer knows. They were used only to test the extent to which cost units are employed. Such cost units can be useful only when they represent computations made upon exactly the same basis from data kept in distributions of the same kind; then they may be used for comparing the costs of one fiscal year with those of another fiscal year in the same city, or for comparing the computations of one city with that of another city of the same size.

The Greatest Need

In the expectation of receiving some personal statements from accounting officials concerning needs in the field of accounting, the writer asked for opinions concerning "the greatest need" in



RALPH W. BABB,
Assistant Superintendent of Schools in Charge of Business Affairs,
Lynn, Mass.
(See Page 127)

the work of school financial accounting. Several pungent opinions came among the 62 replies. One of the novel replies came from six cities which have a state system, saying they are now "satisfied" or that there is "no greatest need." Probably the most daring suggestion came from an official who asked for a simplified system of accounts, adding that the state system which he uses had been designed primarily to save time of officials in the state office. Another reported that the fiscal year of the state board of education and of the comptroller ended on different dates, making complications in account keeping and report making. One stated that the greatest need was "someone" who would perfect a simple system of school accounting, despite the fact that the report came from a state having a system.

Though the replies were stated in a variety of phraseology, the thought of each was condensed into its general idea for ease in compilation. The major part of the number of replies centers around the four general ideas of uniformity, simplicity, adequate classification, satisfaction, as shown in the Table IV.

TABLE IV

Accounting Needs Suggested by Sixty-two of the Cities Comprising This Study of Accounting Status

Suggested Improvements	Total Number	Under 10,000	Over 10,000
Uniformity	21	6	15
Better, Simpler System	10	6	4
Adequate Classification	8	5	3
Satisfied at Present	6	0	6
State Regulation	4	2	2
More Capable Officials	4	3	1
More Assistance Required	2	2	0
Cooperation Board & Supt.	2	0	2
Enlightenment on Importance	1	0	1
Better Interpretation to Public	1	1	0
Better Use of Data	1	0	1
Uniform Fiscal Years	1	0	1
A New System	1	0	1
Totals	62	25	37

Of the 62 opinions offered, 32 virtually express readiness for outside domination or control in the matter of accounting. Twenty-one of these ask for uniformity specifically; 8 ask for more adequate classification; 4 ask for state regulation. Adding the 6 which are satisfied with state control, the number increases to 38, (about 61 per cent of the whole number of statements given), which indicate that state uniformity and, probably, national uniformity is welcome.

Improvement Coming

This presentation of a partial view of the status of school financial accounting gives a preliminary report on the situation. In fact, it reveals an assuring status and a hopeful outlook for early advance and development. Extensive improvement in methods of handling accounts may be predicted. The fact that four of the seven state systems were adopted since 1923 and that a fifth was revised since that date shows recent vigorous activity in the accounting field.

Another strong feature shown by data of this report is the eagerness of many to follow scientific and well-organized systems of accounts. The fact that much of the work has been poorly done, due to low standards both in training and remuneration, does not detract from the general awakening to accounting uniformity, which state systems and the United States bureau of education are bringing about gradually.

General Summary and Conclusions

The accounting situation has improved greatly in the eastern states since Hutchinson made his study in 1914. State systems have been adopted in two of the three states in which he made his investigations and in other contiguous states.

The situation in the middle-western states where Henry made his study in 1924 is stronger than the Illinois study seemed to reveal. Indiana and Michigan, contiguous to Illinois, already have adopted state accounting systems (1924 and 1925).

Despite the hopefulness of the situation, the advance toward careful adequate classification of accounts for specific determination of educational policies in cities under 25,000, cannot come about until some of the following problems have been met. They arise out of conclusions which may be drawn from the preceding discussion.

1. The official in charge of accounts must be given a direct responsibility for the form in which the accounts are to be kept.

2. He must have sufficient educational training to understand the contributions which accounting can make to the functioning of a system of schools.

3. The system of accounts should be as specific as the local needs require and so complete in its classifications that it will allow for extended needs which already have risen in cities of 100,000 population.

4. The lowest point of uniformity should be that of state boundaries so that the accounts of the commonwealth may be studied upon a comparative basis. State control from the office of state auditor or superintendent of public instruction seems to be the only rapid means of impressing the need of uniformity.

5. The systems should, for the sake of convenience in making national reports and national comparisons, be of the general form adopted by national organizations which have, for several years sought establishment of national uniformity.

6. The high point of uniformity can be reached only when all states become willing to set aside their various state systems in favor of one upon which they can combine for the advantage of comparing cost units of one city with cost units of any one or a thousand other cities of the United States.

THE PRACTICAL DREAMER

A great personality does not merely dream dreams and see visions. He purposes to bring his dreams to pass. He has large powers of initiation and self-direction. He doesn't wait for someone to tell him what to do. He is equipped with a self-starter and he keeps it in working order.

A great personality does more than initiate activities; he stays by them and follows them through to achievement. He has great powers of constructive criticism and uses them constantly. He continually compares achievement with goal and judges of his success. He openmindedly reinitiates, and replans, as may be necessary, until achievement is reached.

—S. A. Courtis, University of Michigan.

Burning Questions of the School Board

C. C. Hermann

Schools located in the residential sections of cities come in for considerable criticism during the winter or heating months when they throw off considerable smoke into the atmosphere. However, the residents usually gauge their protests by the degree of visibility of the smoke, not knowing that even a translucent smoke may carry considerable dust. For example, coal containing considerable sulphur causes the smoke stack to throw off sulphur compounds, usually in the form of sulphuric acid which is invisible. Smoke containing this acid results in atmospheric pollution, and has a very disintegrating action on building materials, furnishings, and clothing. The family wash hanging on the line may be assailed as if by an invisible hand.

It is quite possible, however, even with the usual run of bituminous coal, to maintain smokeless combustion and by proper manipulation of the firing to keep the atmosphere of the neighborhood practically clean of dust and deleterious matter. Coal high in volatile matter is smoke-producing regardless of its grade and advantages in other respects. For example, it is a difficult matter to produce smoke with anthracite coal of a low volatile content, regardless of the type of furnace used.

In large industrial plants the problem of smokeless combustion is a comparatively simple matter. Here mechanical stokers and other devices may be installed; the draft may be controlled to almost any degree required; and experienced firemen may be employed. In school buildings, however, the problem is one of more difficulties. The help employed in the boiler room is frequently inexperienced and untrained; in some communities the appropriations may not be of sufficient size to warrant the installations of proper draft equipment; the grates may or may not be the right kind; automatic or mechanical stokers may be out of the question; and the system of buying from the lowest bidder sometimes is responsible for the purchase of coal not adapted to the plant. The main advantage in school buildings, however, in favor of fairly smokeless combustion is that the heating load is constant.

A partial survey of the fireman's duties about the average school building shows him in the light of a janitor who must, in addition to other duties, handle up to a quarter of a ton of coal per hour, care for the pumps if there are such, keep the feed-water level where it should be, clean the boilers, remove the ashes, and perform uncounted other duties. Not infrequently the boiler room is poorly lighted and not well ventilated so that the fireman or janitor may not care much whether the old plant smokes or not.

From the angle of management not so much thought is going to be directed toward smoke abatement if the problem is to be viewed purely as a matter of heat economy. Notwithstanding the cry far and wide that money is being thrown out into the air because smoke from the chimney is rather dark, in reality only a small per cent of the total heat of the coal really goes that way. As low as one per cent of the coal heat value is lost in the form of dark smoke. The actual increase in boiler efficiency obtained by the proper elimination of smoke is not all due to simply the saving in heat, that otherwise shows up in the density of the smoke. The opposite is also possible; that is, a lowering of economy by the elimination of smoke is likely unless the firing conditions are corrected properly.

This latter danger is probably clearer when instances are cited where the smoke has been eliminated by the addition of air. The admission of considerable excess of air in order to avoid smoke usually results in lowering the economy of the plant and then the fireman is called on the carpet for wasting coal. All matters connected with the operation of the boiler plant and the proper firing of the fuel must receive careful consideration if continued high-boiler efficiency is to be maintained.

As pointed out above, smokeless combustion does not insure that all solids have been removed from the smoke; that all sulphuric acid has been removed. In fact it is a difficult matter to remove completely the dust and the acid from the smoke. The dust can be removed from the smoke by electrical methods and the acid can be removed by washing the products of combustion —both impracticable in school buildings.

The dense smoke may result from any one or more of the following causes:

1. Increasing the amount of air admitted to the furnace is one common cause. This method may result in more perfect combustion so long as the amount of such air is under proper control. The usual way of getting more air is to open the ash-pit doors wider. When there is much added draft, flue gas analysis may indicate that actually more heat units are escaping up the stack than before. A good method of control would consist of a damper properly installed in the stack or breeching. The furnace may then be operated with the ash-pit doors wide all the time. In other words, it is better practice to vary the draft by the use of a damper, because in that event infiltration of air above the grate will not exist to such a degree as to reduce the gas temperatures through the passes.

2. Low temperatures of the gas in the furnace-passes is another common cause. The gas stream is directed about the heating surface of the boiler. This heating surface being heat absorbent reduces the temperature of the gas at times to the point where combustion will not be sustained. Under such conditions, considerable combustible material will go up the stack. A gas stream of comparatively high temperature is desirable at all times, and this cannot be maintained when air is being drawn through the boiler setting above the grate. Such air does not carry into the combustion zone its cargo of carbon, but travels through the upper part of the furnace in comparatively large pockets, absorbing heat from the better mixed gases. Complete oxidation of the volatile combustible is necessary for smokeless combustion.

3. Combustion must be complete before coming in contact with the heating surface. Should the volatile combustible impinge on the boiler heating surface, two dire results are likely to take place. First, the heating surface is likely to become overheated, resulting in a bag in the shell or tube from the overheating. Not infrequently rupture occurs, necessitating expensive repairs. Second, the volatile combustible is chilled to the point where combustion cannot continue. The incomplete combustion shows up in the fuel bill and on every building, tree, and structure in the vicinity.

4. The method of firing must be correct. The large majority of school furnaces are hand fired and are essentially smoke producers. This is because the fireman is not as experienced or careful as he should be in the handling of the coal and its distribution over the grate area. For example, the stoking of large quantities of coal over the entire grate area at one time results in the temperature being lowered to such degree that combustion cannot be complete. The green coal throws off its load of volatile matter which rolls through the boiler passes and out of the stack. The grate becomes covered with coke which requires more draft to consume than available and the steam is reduced.

The fire should be coaled, one side at a time, starting at the bridge wall and working forward. After an interval of time, the opposite side of the fire should be coaled in the same manner. This permits the live coals on one side to thoroughly ignite the volatile matter thrown off by the green coal on the opposite side. Should the coal coke easily, there is still sufficient draft through half of the grate area to properly consume it. It is desirable that the doors be kept cracked slightly after each firing, to insure the necessary air for complete combustion.

The smoke nuisance may be abated in large part by attention to the points in the preceding paragraph: It is likely, however, that good results will not be insured unless (*a*) the plant is checked up by a competent engineer and is of correct capacity and design for the work to be done; (*b*) coal of the right quality is purchased; and (*c*) a competent janitor or fireman is trained for the job and his work so adjusted that he can give the firing due attention.

A Superintendent's Official Letters – III

To the Principals:

I am glad to welcome you to the beginning of another school year. I trust it will be even better than the best school years that we have had. The beginning of a new school year always presents problems of adjustment. New teachers find themselves in a new environment, among strangers. They should be so received that they will know that they are among friends. Nothing gives a new teacher more courage to face new conditions and new tasks than to realize that she is a member of a friendly school family and that her associates are really interested in having her succeed.

The teachers who are experienced in the service must also make adjustments from the vacation period to the school life. It is well to encourage them to relate some of their vacation experiences to each other and to their pupils. A few social gatherings at the close of school are worth while.

I realize that a good school system in order to remain good must not have a single poor school in the entire system. Whether a school is good or poor depends to a very great extent on the principal. One poor school will attract more public attention than half a dozen good ones. Therefore, no school system can afford to have one poor school and hope to be classified as a good system. The reputation which our city has for the excellence of its schools is due in large measure to the excellence of the administration and supervision conducted by the principals.

Just as a city-school system depends for its excellence on not having any poor schools, so does the individual school depend for its excellence on not having any poor classrooms. In order to have a good classroom a good teacher is necessary. No one can guarantee to furnish you with a good teacher in every case. The superintendent attempts to do so but circumstances beyond his control make that impossible sometimes, and even if he had unlimited authority and unlimited funds to use in the selection of teachers he could not in every case furnish you with a teacher who is such a good teacher

(Continued on Page 153)



ENTRANCE DETAIL, THE MADISON SCHOOL, SANTA MONICA, CALIF.
F. D. Rutherford, Architect, Santa Monica, Calif.

THE MADISON ELEMENTARY SCHOOL AT SANTA MONICA, CALIF.

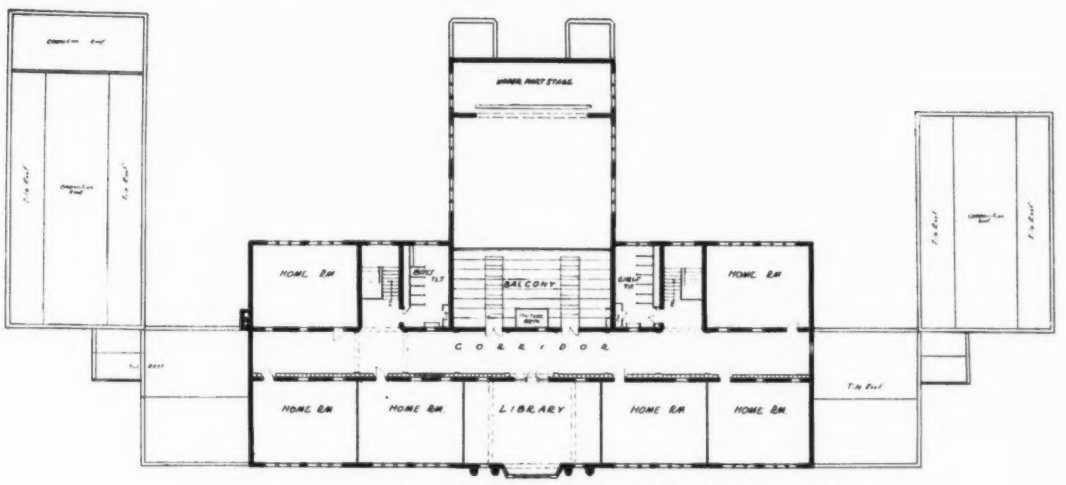
The new Madison school at Santa Monica, Calif., has the distinction, according to local school authorities, of having the highest proportion of usable floor space of any elementary school in southern California. In addition, the local school authorities point to the dignified character of the architecture and the low cost of construction as marks of unusual planning and efficient study of a school-building program. The educational layout of the building was prepared by Mr. Frederick F. Martin, superintendent of city schools, and the plans were drawn by Mr. Francis D. Rutherford, architect.

The Madison school was built with the idea of expansion to twice the present size. Consequently, heating equipment, electrical devices, plumbing connections, all have been designed to meet a double capacity and were installed in the first unit.

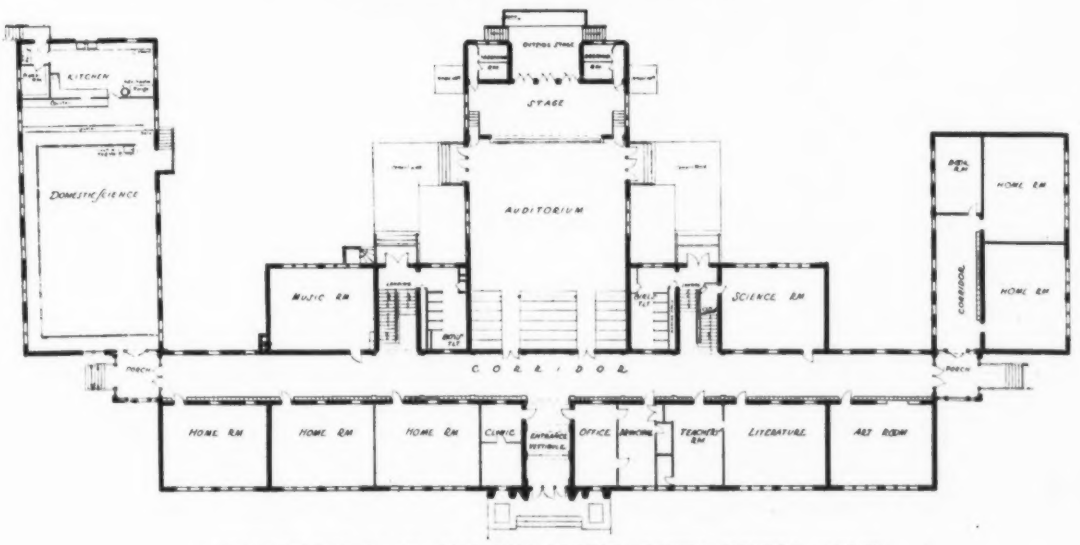
The building is two-story and of reinforced concrete construction. It consists of fourteen classrooms, a library furnished in oak, an auditorium of 575 seats, and a cafeteria of 250 capacity. The roof is of Holland tile, and the outside walls are faced with tough, common, burnt brick of two colors. Terra cotta, which has been found impervious to salt air, has been used for trimmings and façade.

Especial attention has been given to the design and finish of the corridors. The walls are of gray-green and the ceilings are buff. Lockers are set in one wall of each corridor. These are of the long and of the box types for storing the clothing as well as the books and special study materials of the pupils. The corridor floors are covered with battleship linoleum for quiet.

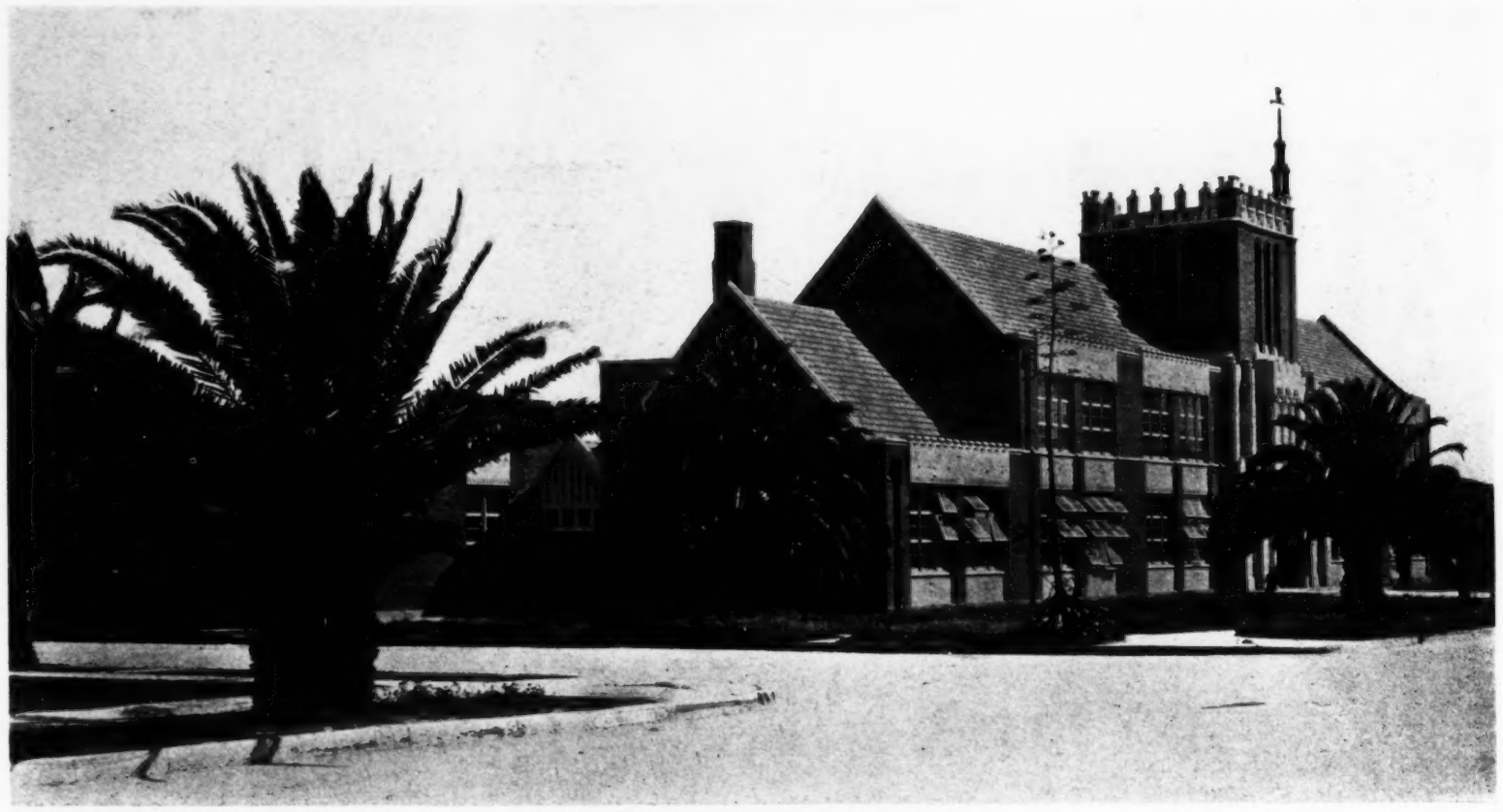
Each of the classrooms has six windows of the three-section universal type. All windows are fitted with Venetian blinds, which are



SECOND FLOOR PLAN, MADISON SCHOOL, SANTA MONICA, CALIF.
D. Rutherford, Architect, Santa Monica, Calif.



FIRST FLOOR PLAN, MADISON SCHOOL, SANTA MONICA, CALIF.
D. Rutherford, Architect, Santa Monica, Calif.



THE MADISON SCHOOL, SANTA MONICA, CALIF.
F. D. Rutherford, Architect, Santa Monica, Calif.



DETAIL OF CORRIDOR CEILING IN THE MADISON SCHOOL, SANTA MONICA, CALIF.
F. D. Rutherford, Architect, Santa Monica, Calif.

especially desirable in a climate where circulation of air must be constant during the warm hours of the day. The classrooms have battleship linoleum floors, slate blackboards, and acoustical plaster on the walls and ceilings.

The room on the first floor where music is taught has been especially sound-proofed with acoustical plaster so that outside in the corridor hardly anything can be heard when classes are in session. The auditorium, which has also been treated for acoustical qualities, is interesting in that it contains two stages: one for the auditorium proper, and another facing outward for larger gatherings in the school yard. The artroom has been especially fitted with cabinet space and cork tack boards. The domestic-science room serves as a cafeteria, and is fully equipped.

The building is heated by means of a low-pressure steam-heating system with direct radiation in each of the rooms. In the administrative offices gas-steam combination radiators are installed so that outside of school hours the boiler need not be operated to provide warmth for the office workers.

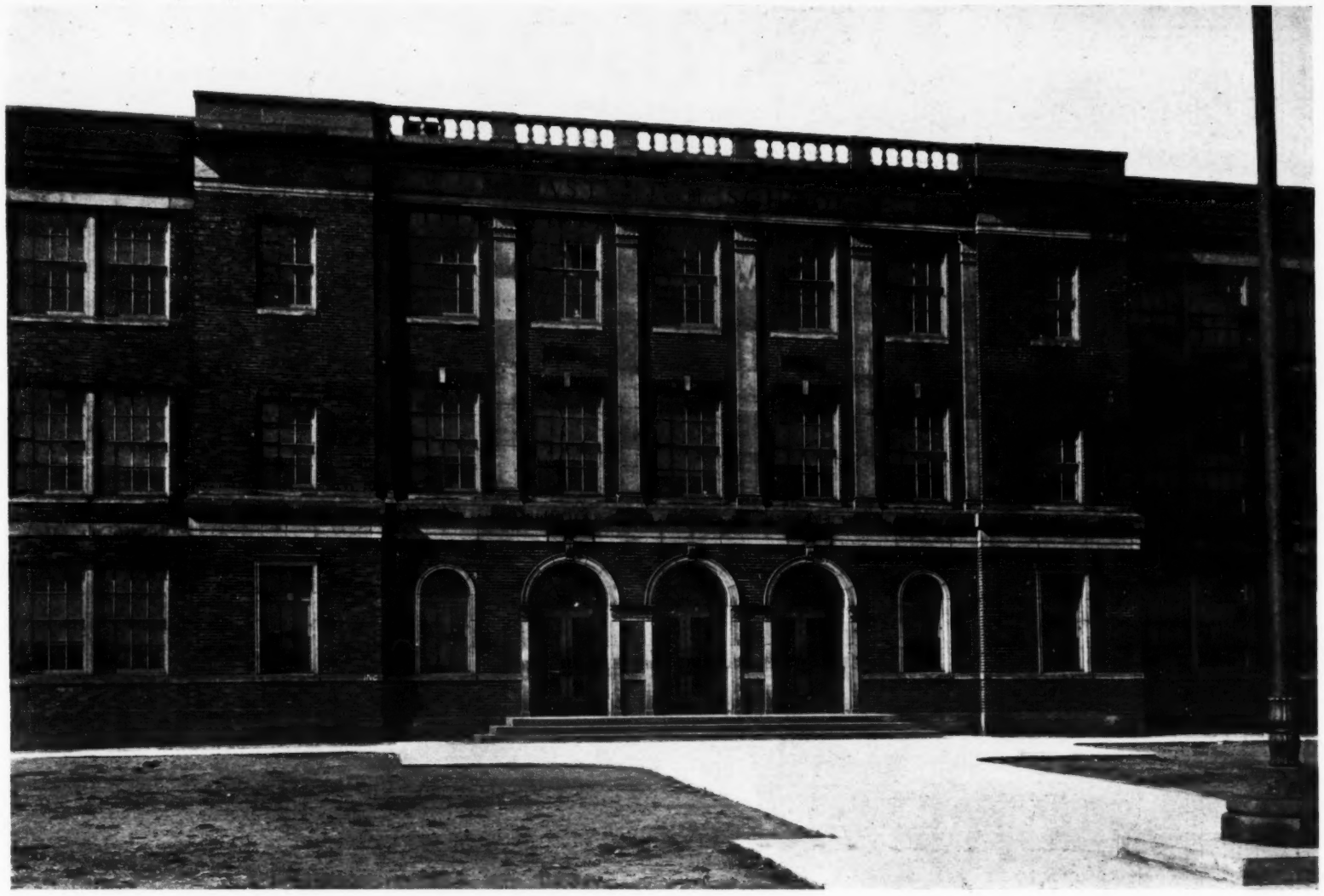
The room for medical inspection, the laboratories, and the domestic-science department are fully equipped with gas, water, and electricity. The electric power is brought into the basement of the building where a transformer is installed in a fireproof room with ample safety switch-blocks. A fire-alarm system in direct connection with the fire department is installed. Fire hoses are provided at central points.

The building cost $128,125.

New York High-School Luncheons Made Profit

With a total business of nearly two-thirds of a million dollars, the lunchrooms in 28 of the New York City high schools have made an aggregate profit of $34,244, while in five other schools they have been operated at a loss of $2,922, according to the semiannual lunchroon report for January, 1927, issued by Frank A. Rexford, director of civics in the high schools.

From a financial standpoint the Monroe High School lunchroom was the most successful, finishing the term with a profit of $7,044, which was nearly three times as much as the next highest profit of $2,395, reported by the Alexander Hamilton High School. Thirteen of the schools reported profits in excess of $1,000 each. In the other thirteen schools the profits ranged from $7.77 to $944.



ENTRANCE DETAIL, EAST HIGH SCHOOL, YOUNGSTOWN, OHIO.
Paul Boucherle, Architect, Youngstown, Ohio.

THE EAST HIGH SCHOOL AT YOUNGSTOWN, OHIO

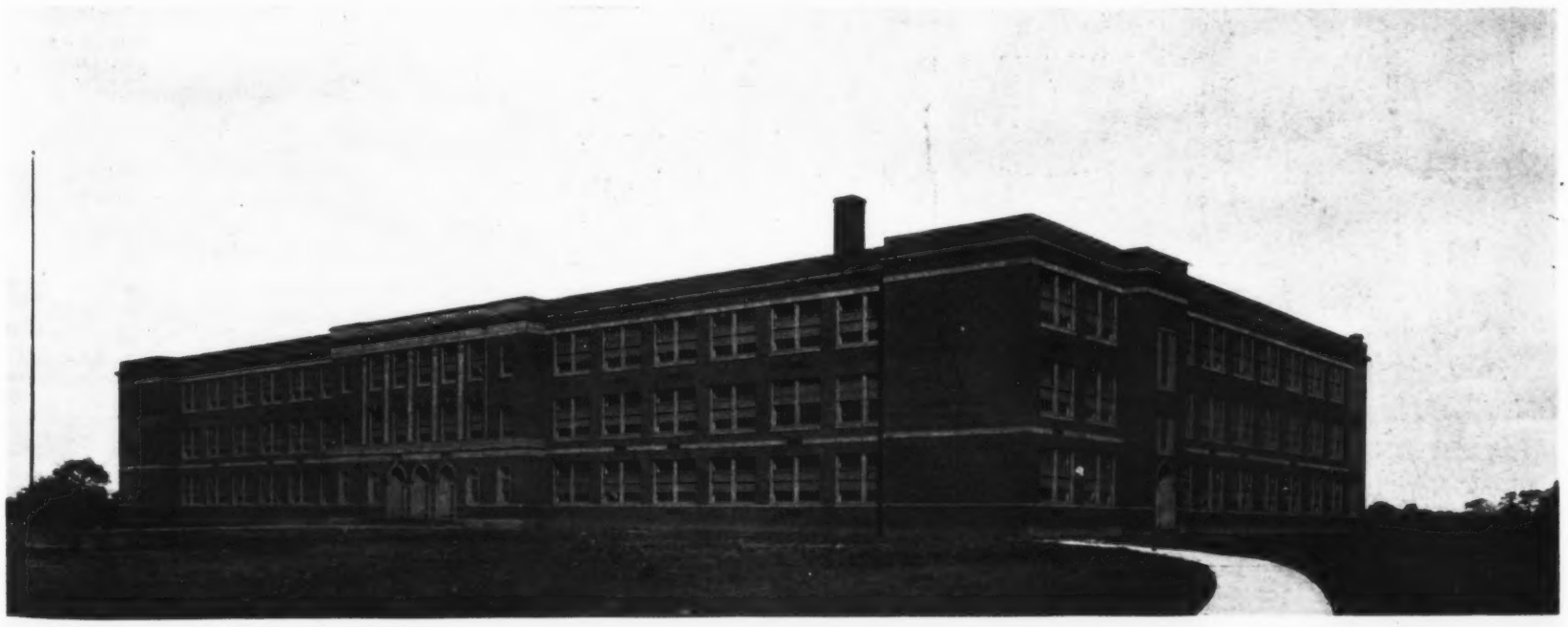
The new East High School at Youngstown, Ohio, has been planned to meet the complete high-school needs of an important section of the city, and houses a high-school organization of the cosmopolitan type. The building is entirely fireproof and is built to house 2,200 students. The local school authorities consider it the most economical school building in the State of Ohio, considering its completeness and the high quality of materials used, etc.

The building resembles in shape a huge letter E, with classrooms along the main front and in the two wings, and the auditorium and gymnasium in the middle wing. The building has a frontage of 385 ft. and a depth of 165 ft. It contains no basement except for necessary pipe corridors, and a small space for heating and ventilating apparatus.

The exterior of the building is simple but imposing, with classical details in the cornices and about the entrances. Stone has been used for the cornice belts, window sills, steps, and entrances. The exterior walls are faced with mixed shades of red brick. The interior construction is of modern steel joists, brick, tile, and concrete and is entirely fireproof. The walls of the stairways and corridors are faced to a height of seven feet with brick. The floors of the corridors and toilets are of terrazzo. The interior trim throughout the building is oak, the floors are of maple, and the walls and ceilings are of plaster.

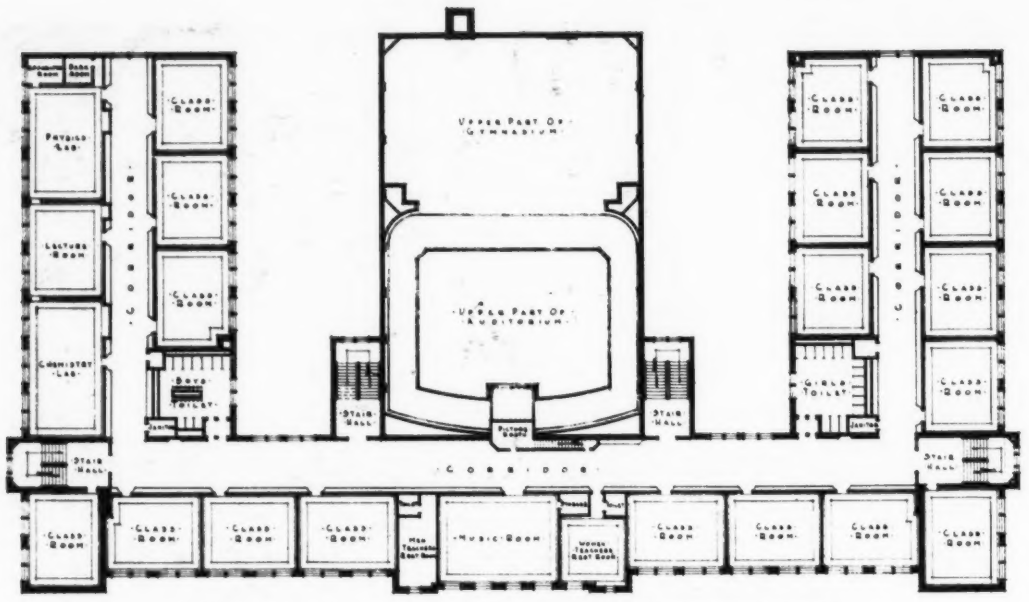
The building has five general entrances located at strategic points. Communication between floors is by means of four stairways located with a view of best serving the important lines of travel. Each stairway is enclosed in a fireproof stair hall, cut off from the adjoining corridors by means of fireproof doors. In locating the stairways attention has been given to the possible enlargement of the building, and the placing of additional stairs in the extensions of the side wings.

The first floor contains administrative offices and a health clinic on either side of the main vestibule which gives access directly to the main corridor, the auditorium and the central stair halls. One half of the first floor is devoted to the shops and workrooms for boys and the

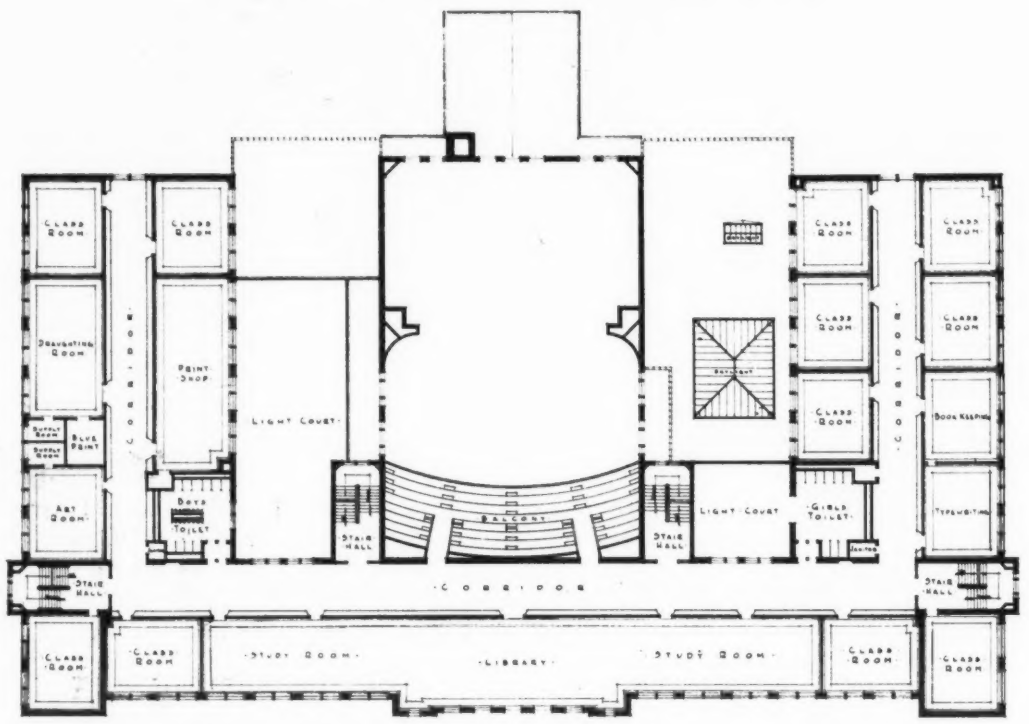


EAST HIGH SCHOOL,
YOUNGSTOWN, OHIO.

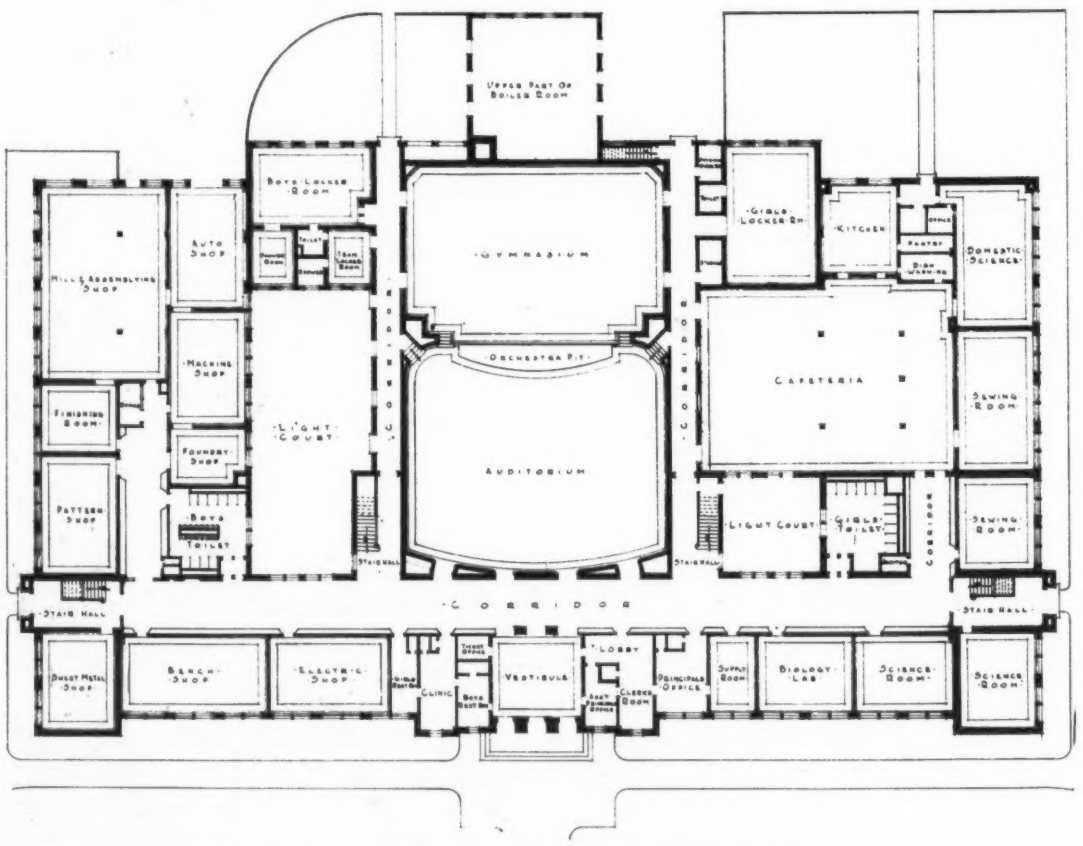
Paul Boucherle, Architect,
Youngstown, Ohio.



THIRD FLOOR PLAN, EAST HIGH SCHOOL, YOUNGSTOWN, OHIO.



SECOND FLOOR PLAN, EAST HIGH SCHOOL, YOUNGSTOWN, OHIO.



FIRST FLOOR PLAN, EAST HIGH SCHOOL, YOUNGSTOWN, OHIO.
Paul Boucherle, Architect; Youngstown, Ohio.

other half contains the science rooms, the cafeteria and its kitchen, and a series of household-arts rooms.

The main floor of the auditorium is entered from the first-floor corridors. In back of the auditorium and forming the stage is the gymnasium. The proscenium arch is practically the full width of the auditorium and, when the curtains are drawn back, a complete view of the gymnasium may be had from any one of the twelve hundred seats. Adjoining the gymnasium on either side are locker rooms for boys and girls, offices for instructors, showers, and toilets, etc.

The main features of the second floor are the library and the two large study rooms. There are also on this floor eleven classrooms, an art-room, a room for mechanical drawing, a print-shop, and rooms for commercial work. The balcony of the auditorium is entered from the second floor.

The third floor contains eighteen classrooms, two laboratories with a lecture room between, a music room, and restrooms for men and women teachers.

Restrooms, toilets, janitors' rooms, and supply rooms are well arranged on each floor.

Attention has been given to the mechanical plant which is complete in every detail. The building is heated by means of low pressure water-tube boilers which supply steam for heating and ventilating units in each classroom, shop, and workroom. The auditorium and the gymnasium are heated and ventilated by means of a central fan system so arranged that it may be operated independently or shut off completely without reference to the balance of the building. Automatic heat regulation is installed to insure even temperature and economical operation.

The sanitary plumbing system is modern in every way, and toilet fixtures, lavatories, drinking fountains, and shower baths are of heavy-duty type and of late design.

The electric system is complete. Wires are carried in conduits, and special provisions have been made for the program clocks, signal system, and telephone system. Corridors, stairways, and classrooms are well lighted so that the building is properly equipped for night use. The classrooms have six ceiling outlets and are fitted with six 200-watt lamps each. Electric power lines have been carried into the shops, workrooms, and laboratories. These rooms are also equipped with necessary gas and water outlets.

Contracts for the building were awarded on March 1, 1925, and the building was ready for occupancy September 1, 1927. The contracts were as follows:

General Construction—The Heller Bros.	$399,443.00
Plumbing—Little Bros. Co.	37,550.00
Heating and Ventilating—W. J. School Co.	111,950.00
Electric Wiring—Bell Electric Co.	14,780.00
Total Cost	$563,723.00

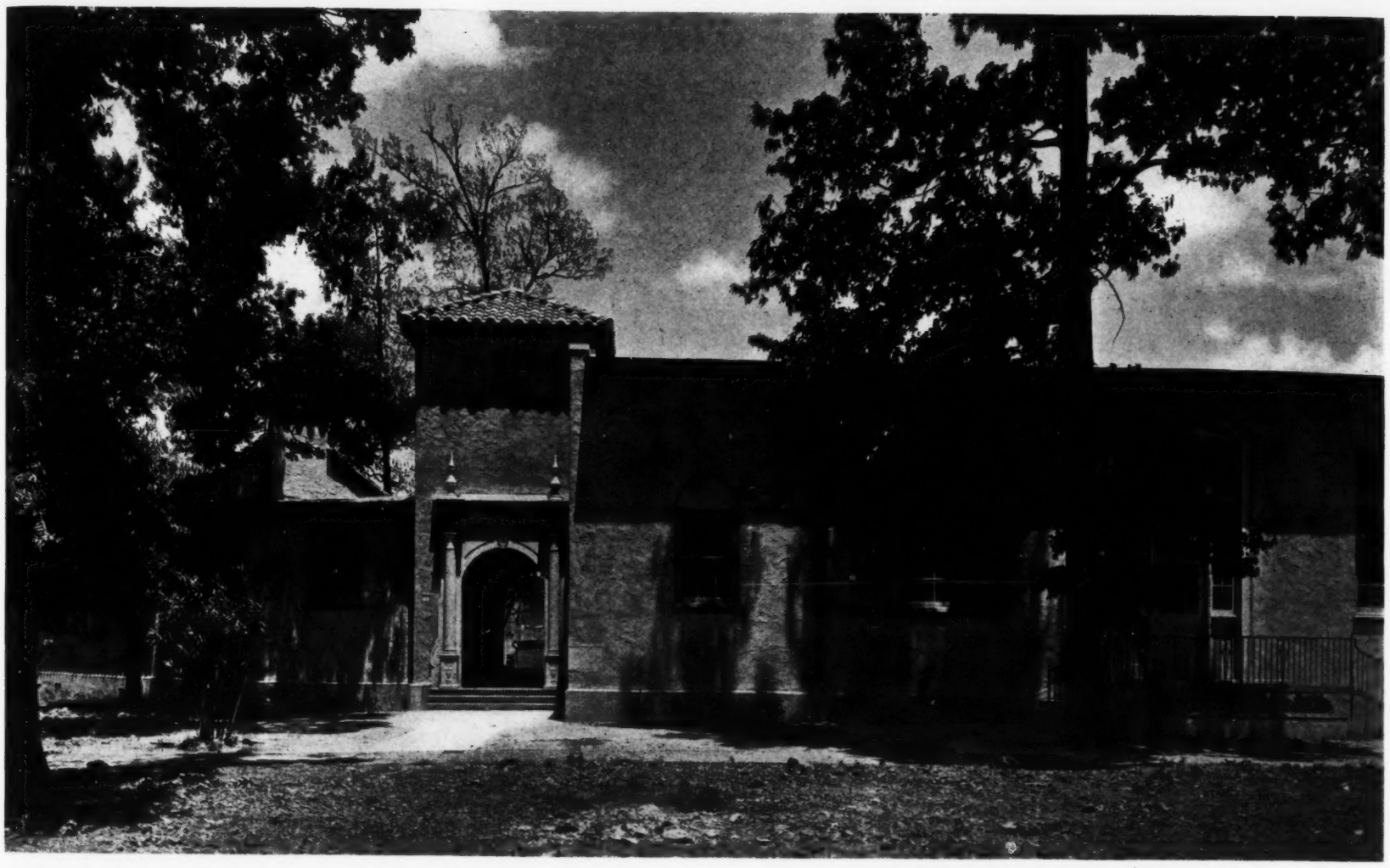
On the basis of a total cubage of 1,800,000 feet, the cost was 31 cents per cubic foot. On the basis of initial ordinary pupil capacity of 2,200 the cost was $265.

The building was designed by Mr. Paul Bourcherle, architect, and Mr. Walter J. Canfield, associate, Youngstown, Ohio.

DUPONT MAKES GIFT FOR SCHOOL BUILDINGS

—Mr. Pierre S. DuPont on July 2 presented a gift of $400,000 to the state of Delaware to be used for new school buildings in the state. The present gift brings the total donations of Mr. DuPont for this purpose to more than $4,000,000 in nine years.

The money will be used to build new school buildings in designated districts and will be distributed under the direction of the Delaware School Foundation, which directs the construction work and provides for architectural accounting and engineering at no cost to the state.



EXTERIOR VIEW OF EASTWOOD ELEMENTARY SCHOOL, HOUSTON, TEX. Harry D. Payne, A.I.A., Supervising Architect, Houston, Tex.



ENTRANCE TOWER, EASTWOOD ELEMENTARY SCHOOL, HOUSTON, TEX. Harry D. Payne, A.I.A., Supervising Architect, Houston, Tex.



AUDITORIUM-CAFETERIA-PLAYROOM, EASTWOOD ELEMENTARY SCHOOL, HOUSTON, TEX.
Harry D. Payne, A.I.A., Supervising Architect, Houston, Tex.



SKETCH OF THE ENTRANCE DETAIL AT EASTWOOD ELEMENTARY SCHOOL, BY HARRY D. PAYNE, SUPERVISING ARCHITECT, HOUSTON, TEX.

THE EASTWOOD AND MONTROSE ELEMENTARY SCHOOLS, HOUSTON INDEPENDENT SCHOOL DISTRICT, HOUSTON, TEXAS

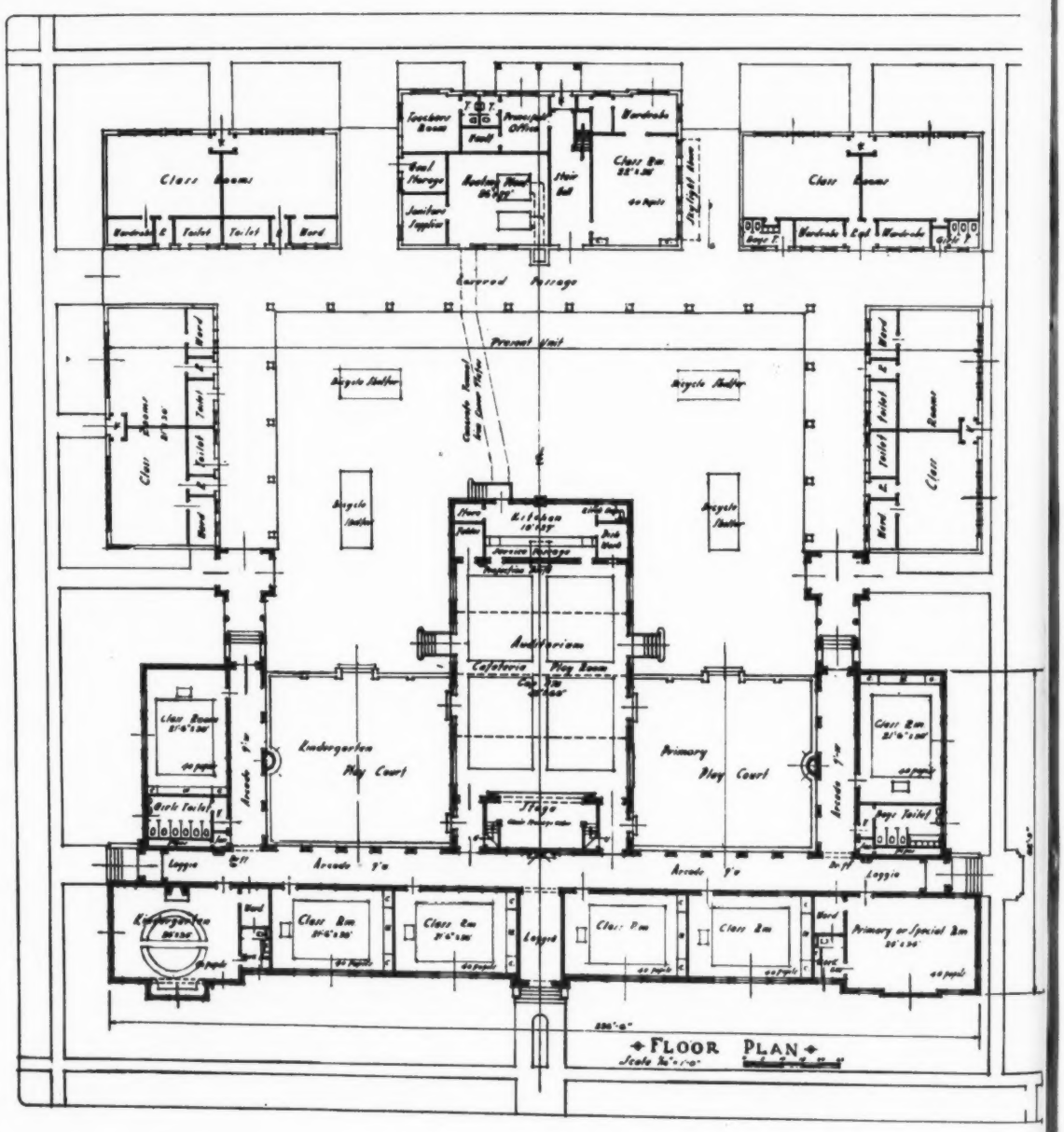
Harry D. Payne, A. I. A., Supervising Architect

When the electorate of the Houston Independent School District voted in the fall of 1925 to intrust its board of education with the expenditure of $4,000,000 for an elementary-school-building program, they did so in the knowledge that the board and its executives had made an intensive study of the district's needs and with the further knowledge that the board had set up a very definite program for satisfying those requirements. One provision of this program called for the retaining of an architect conversant with educational building practices as a full-time supervisor of the building program. Other provisions outlined in the board's program designated, by general locality, sites for new schools; present sites for enlargement; new buildings to be erected; additions to buildings; alterations for buildings and rehabilitation work.

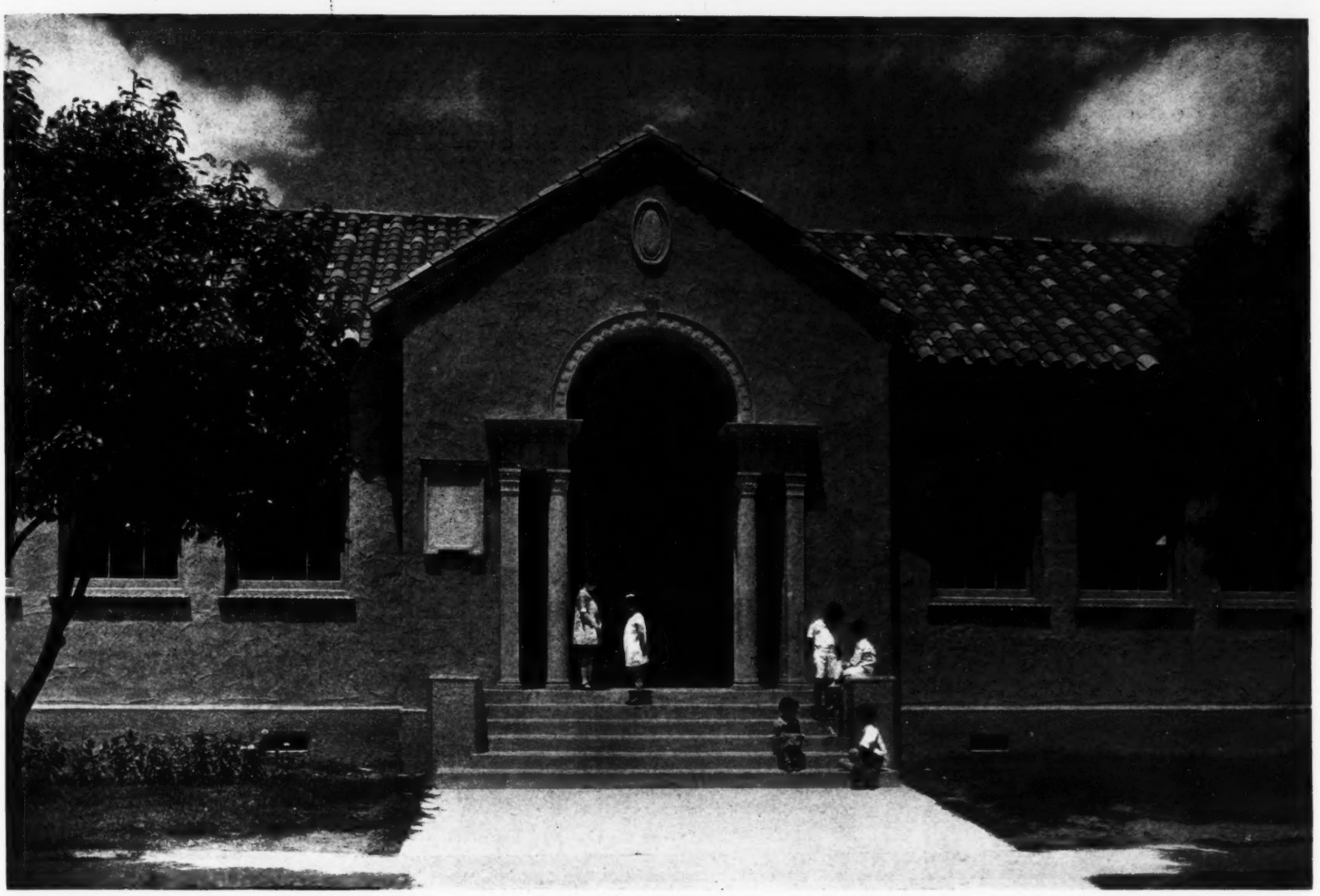
The supervising architect was appointed shortly before the close of 1925 and assumed the duties of his office at the beginning of the year 1926. With many sites to be secured and with a number of schools scheduled for site additions, two schools with ample grounds naturally indicated themselves as the initial projects of the new program. In this manner the Eastwood and Montrose schools became the recipients of first attention.

After a study of local conditions by the supervising architect, the board adopted his proposal for expediting the program, which in its essentials provided that the supervising architect should have general control of the architectural and construction phases of the program and that he would be assisted by some half dozen architectural firms whose members would be denoted as associate architects. In this way the board would benefit from the supervising architect's knowledge and experience in handling educational building problems and there would be available established organizations to amplify his efforts in applying this knowledge and experience to the Houston problem. The policy adopted by the board provided for the preparation of all preliminary studies, sketches, and reports by the supervising architect.

Some further word will be interpolated here relative to the general methods adopted for carrying on the program, since such an explanation will make clear the methods under which the program has been and is being successfully executed. In the preparation of preliminary plans, the supervising architect has



MONTROSE ELEMENTARY SCHOOL, GREELY AND CONNOR STS., HOUSTON, TEX.
Harry D. Payne, A.I.A., Supervising Architect, Houston, Tex.



ENTRANCE DETAIL, MONTROSE ELEMENTARY SCHOOL, HOUSTON, TEX.
Harry D. Payne, A.I.A., Supervising Architect, Houston, Tex.



GENERAL VIEW OF MONTROSE ELEMENTARY SCHOOL, HOUSTON, TEX.
Harry D. Payne, A.I.A., Supervising Architect, Houston, Tex.



PRIMARY PLAY COURT, MONTROSE ELEMENTARY SCHOOL, HOUSTON, TEX.
Harry D. Payne, A.I.A., Supervising Architect, Houston, Tex.



AUDITORIUM-CAFETERIA-PLAYROOM, MONTROSE ELEMENTARY SCHOOL, HOUSTON, TEX.



KINDERGARTEN, MONTROSE ELEMENTARY SCHOOL, HOUSTON, TEX.
Harry D. Payne, A.I.A., Supervising Architect, Houston, Tex.

throughout the program had the fortunate advice and helpful counsel of Dr. E. E. Oberholtzer, superintendent of schools, and of Mr. H. L. Mills, business manager, in all matters pertaining to educational policy and business administration. Each of the plans has gone to the school board for approval and assignment to one of the associate architects, as the result of the joint study and with the combined recommendation of the superintendent, the business manager, and the supervising architect. The associate architects thus have received for development into working drawings, sketch plans which bore the approval of the board of education. They also have received from the office of the supervising architect a report setting forth briefly the type of structure contemplated and an outline of the materials and finishes required for the various portions of each building. Suggestions for the plumbing and heating systems were incorporated in the reports.

To coordinate the work and assure harmony of detail throughout the program, the supervising architect prepared and distributed a set of Houston school-building details to each associate firm. The plans and specifications for each project have been examined regularly during their development by the supervising architect with a view to making certain that they were being carried out in the spirit of the approved sketches and that they embodied the requirements of efficient educational buildings.

The original units of the Eastwood and Montrose schools, although separated by some four or five miles, were of the same one-story detached-unit type and they present a marked architectural resemblance. Bearing in mind the availability of sufficient ground for building purposes and the above mentioned similarities of plan, structure, and appearance, it appeared that it would be feasible to coordinate the development of working drawings. After the board had approved the original plan and exterior-design studies prepared by the supervising architect, these projects were assigned to Mr. James Ruskin Bailey as associate architect.

The reproductions of the sketch plans presented herewith offer an interesting study, showing as they do the compactness of plan which can be secured through a careful disposition of parts. The new units in actuality present an airy, open appearance without being as extended and unwieldy as the initial developments.

The contracts awarded include alterations and repairs in the original buildings. Without endeavoring to separate the cost of work in the old units, the following tabulation offers the customary unit costs:

Eastwood School (6 Clrms.) Montrose School

	Eastwood School (6 Clrms.)	Montrose School (8 Clrms.)
General Contract	$60,597.00	$65,455.00
Plumbing Contract and Heating Contract	10,703.43	9 800.57
Electric Contract	2,632.00	2,800.00
Total	$73,932.43	$78,055.57
Cost per cu. ft	29.1c	25.4c
Cost per pupil	$217.36	$178.72

The exterior design of the original units has been variously styled in the writer's hearing as Aztec, Mexican, Spanish, and Mission, and it would be presumptuous to establish one of these styles as the architecture of the new units. The recently completed buildings can logically be classified as examples of Mediterranean architecture. Some of their details are reminiscent of Spanish work, while others recall certain Italian motifs. The open arcades or cloisters, which serve for corridors, add strength in the popular mind to such a claim. Without being stylistic, the buildings are harmonious and they fit well into the semitropic climate of Houston, Texas.

School Bonds and Bonding Methods

A Discussion Based on the Bonded School Debt of the State of Arizona.

C. R. Tupper, Miami, Ariz.

The rapid growth in volume of bond issues and the increasing demands made upon current school revenues for the payment of interest and redemption during recent years has directed the attention of school administrators and educational officials to the subject of bonds as one of the most important features of school finance.

While annual taxation and the pay-as-you-go policy are commonly recognized as the normal and most desirable means of financing school buildings, bonding still remains the unwelcome but necessary expedient for the vast majority of communities.

The unprecedented building activities of the post-war period were financed mainly by bonding. As a result we find charges for debt service mounting rapidly and absorbing an ever-increasing percentage of current revenues which should go to the support of school maintenance. This tendency is well illustrated in Arizona through the expenditures for debt service during the past four years. In 1920-21 charges for interest, bond redemption, and sinking funds amounted to 11.2 per cent of the current expenditures. In the three succeeding years the percentage advanced progressively to 13.4, 14, and 14.5 per cent respectively.

It becomes increasingly important, therefore, to inquire into the characteristics of various types of bonds, and to study the trends in bonding policies as carried out by the schools.

A bond issue is a business proposition, and as such the reduction of total cost to the lowest possible point is an object of prime consideration. It is a mortgage upon every taxable piece of property in the community; when it is issued taxes are automatically increased and the possible resources for current school maintenance are automatically reduced. It increases overhead charges and discourages further expansion. It is an expensive and undesirable method of financing capital outlays, but it continues to be the only resort in many instances.

When it becomes necessary for a school district to issue bonds in order to pay for needed school buildings, we expect the wisest and soundest procedure to be followed. But in spite of the importance of developing and maintaining a sound policy of debt creation and retirement we find a widespread lack of familiarity with the subject on the part of school executives and public officials charged with the function of issuing bonds. As a result districts, counties, and communities blindly follow precedent or drift aimlessly in their bonding policies, disregarding the fact that there is a wide difference in total cost and general desirability between the various types of bonds.

The Situation in Arizona

The matter of bonded debt in the state of Arizona has received scant attention in the past. The state is young and rapidly growing. During the decade from 1910 to 1920 its population increased 63 per cent while its school enrollment advanced 244 per cent. These figures indicate a more rapid expansion than is found in any state in the Union during the same period. During this time three fourths of the present school plant was erected, and in compliance with state law, was financed through bond issues. As a result Arizona stands first among the states in ratio of school debt to taxable wealth with $12 per $1,000. The school debt of $113 per child again ranks highest in the Nation, while the percentage of school property covered by debt ranks her among the five highest states with 69 per cent.

This condition is to be expected, however, in view of the rapid expansion of the state. The median age of all buildings is seven years, and 75 per cent have been erected within the past ten years. The state has scarcely had time to pay much of her debt, and in addition to this fact we find the larger portion of the debt existing in the form of term bonds which cannot be paid off until due. The apparent magnitude of the debt would be somewhat decreased if sinking funds were credited, although these amount to only eight per cent of the total.

The growth of the school debt in the state as compared with the growth of debt for roads and for all purposes, is shown in Table I, and indicates, that rapid as the growth of school debt has been there has been an even more rapid increase in debt for other purposes.

A study of the progress made in financing bonded debt shows the following comparisons between the school debt and the total debt.

	School Debt	Total Debt
Amount paid off	5 %	4 %
Amount in sinking fund	8.2%	5.5%
Amount to be raised	86.8%	90.5%

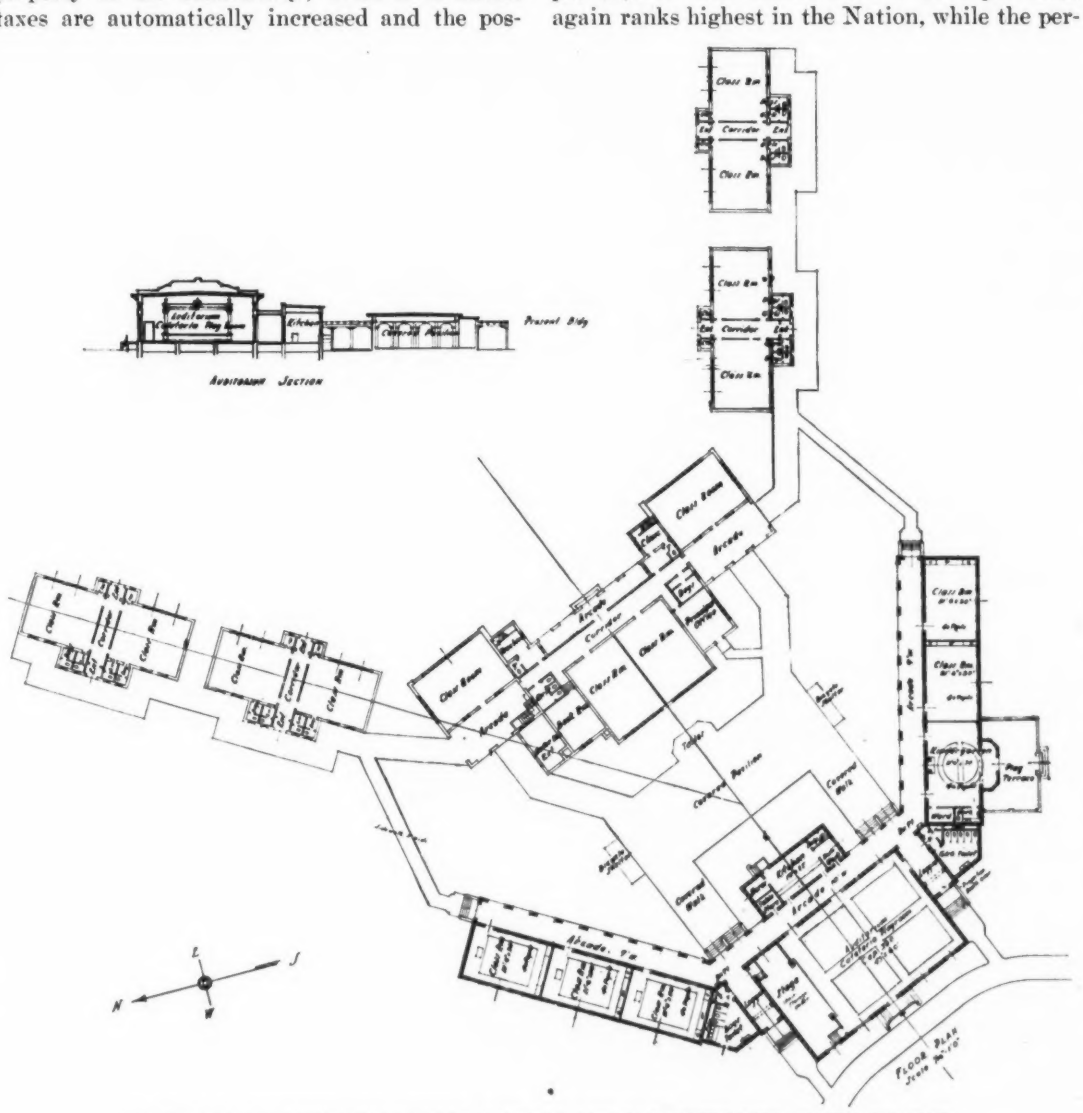
In comparison with total debt the schools have made slightly more progress in financing their obligations, but the burden of lifting the debt has scarcely begun in either case.

Powers and Policies of the School Boards

The initiative in the issuance of school bonds in the state of Arizona rests with the school district. Boards of trustees may issue the call for a bond election and must state in the call the form of the bond as to interest and maturity and the purpose of the issue. A maximum limit of six per cent of the taxable valuation of the district is set by law; bonds may not sell below par, must not pay more than six per cent interest, and must not run for more than twenty years.

According to statutes funds derived from taxation for school maintenance may not be used for purchase of land or for the erection of school buildings, and it becomes necessary to bond when these functions are to be carried on. As a result the law practically compels the creation of debt even for small expenditures which might well be handled from current funds. Bonds have been said to constitute the most expensive method of obtaining public funds, this being due to the amount of interest that must be paid, and which usually doubles or more than doubles the original cost of the improvement. An extreme example of this is found in the case of one district within the state which is carrying a 40-year five-per-cent bond of $500. The original cost of $500 will become $1,500 before principal and interest are paid.

The effect of existing law has been to encourage such instances as the above, and it has served to increase the burden of school financing of buildings by making it necessary to bond in cases where current funds could have been used to defray the expense. It is gratifying to note however, that when attention was called to this condition, the last legislature provided a partial remedy through a law allowing districts to include in their annual budget, by and with the consent of the county board of supervisors, an amount not greater than ten cents per $100 valuation for the purpose of purchasing school sites or for erecting or purchasing school buildings. A loophole has thus been provided to allow districts to escape bonding, but unfortunately this privilege is still controlled by the board of super-



EASTWOOD ELEMENTARY SCHOOL, DALLAS AND McKINNEY AVE., HOUSTON, TEX.
Harry D. Payne, A.I.A., Supervising Architect, Houston, Tex.

TABLE I—Growth of Bonded Debt in Arizona 1913-1923

Year	Schools	Roads	Total Debt	Schools	Roads	Total
	Thousands of Dollars			Percentages		
1913	1,732	751	6,319	27.1	4.2	68.7
1914	2,502	1,126	8,125	30.8	7.7	61.5
1915	2,963	1,729	9,533	31.1	12.9	57.0
1916	3,416	2,442	10,722	31.9	18.2	49.9
1917	3,800	3,003	12 177	31.2	20.7	48.1
1918	4,453	4,352	14 688	30.4	26.4	43.2
1919	6 247	11 445	26,934	24.0	42.0	44.0
1920	8,928	13,712	32.545	27.5	40.6	31.9
1921	10,196	19,682	41,451	24.6	46.9	28.5
1922	10,764	20,543	43,594	24.2	46.1	29.7
1923	10,838	20,599	43,843	24.2	45.0	30.8

visors, a body not familiar with the immediate needs of schools and not having the interests of local districts as their prime consideration.

The initiative for the creation of debt and the responsibility for its form rests with the school boards of the various districts. These bodies are made up of conscientious and representative persons of the various communities. It is unusual, however, to find in their personnel members who are familiar with bonding practices and who are aware of the comparative advantages and costs of the different bond types. As a result, bonding practices of districts and counties within the state show no well-defined plan and reflect the influence of precedent and temporary circumstance.

In attempting to define the bonding policies of the districts, we may classify their bonds on the basis of maturities into term, optional, and serial bonds.

Term bonds are issued for a definite period, usually twenty years in Arizona, and are retired by a single payment at the end of the term.

Optional bonds are term bonds which contain a clause making their retirement optional with the borrower at some time prior to the maturity date. Thus a ten-twenty optional bond is intended to run for twenty years but is redeemable any time after the tenth year at the option of the borrower. In practice, however, the optional privilege is rarely utilized although the borrower pays a higher price to secure it.

Serial bonds are issued for a definite term, but the units are numbered serially and a certain number are retired each year.

There are various combinations of these types, but for purposes of this paper all bonds may be thrown into one group or the other.

A study of the bonding policies in Arizona reveals the following statistics regarding types of bonds issued:

CLASSIFICATION OF BOND ISSUES, 1913-1923, BY AMOUNTS ISSUED
(Percentages)

Year	By Individual Years			By Cumulative Amounts		
	Term	Optional	Serial	Term	Optional	Serial
1913	72.5	15	12.5	72.5	15.0	12.5
1914	66.5	23.8	9.7	72.3	18.0	9.7
1915	40.8	15.5	43.7	65.7	17.6	16.7
1916	44.6	33.5	21.9	64.2	19.2	16.6
1917	38.0	30.4	31.6	61.5	20.7	17.8
1918	8.9	19.5	71.6	55.2	20.6	24.2
1919	43.7	44.4	11.9	52.7	27.8	19.5
1920	67.4	24.4	8.2	64.4	30.1	17.5
1921	23.2	10.2	66.6	53.6	25.0	21.4
1922	24.9	28.9	46.2	52.9	24.5	22.6
1923	60.0	40.0	....	52.9	25.6	21.5

CLASSIFICATION OF BOND ISSUES, 1913-1923. NUMBER OF ISSUES VOTED
(Percentages)

	By Years			Cumulative Amounts		
	Term	Optional	Serial	Term	Optional	Serial
1913	83	12	5	83.4	11.5	5.1
1914	82	14	2	83.4	12.5	4.1
1915	76	24	0	82.1	14.5	3.4
1916	72	19	9	80.7	15.1	4.2
1917	75	19	6	80.3	15.3	4.4
1918	61	17	22	78.1	15.6	6.3
1919	73	15	12	77.2	15.5	7.3
1920	85	6	9	78.0	14.4	7.6
1921	54	31	15	77.0	15.2	7.8
1922	64	14	22	76.3	15.1	8.6
1923	50	50	0	76.0	15.2	8.8

For the period 1913-1918 65% are term bonds.
For the period 1919-1923 72% are term bonds.

Arizona's bonding policy has favored term bonds, both as to total amount issued and total number of issues voted. More than three fourths of the total amount of bonded debt is in term or optional bonds, while 90 per cent of all issues voted are found in these two classifications.

Few Serial Bonds

Serial bonds constitute only one fifth of the total amount of debt and less than one tenth of the number of bonds. There is a tendency to increase the use of serial bonds, but the tendency is slight on the basis of number of issues voted. The stronger tendency toward serial bonds which is observed in the table based on amount of bonded debt is due to the use of serial bonds in some of the largest issues as is shown in the following table.

PERCENTAGE OF BONDED DEBT IN SERIAL FORM

Bonds of $30,000 and below	7.8% serial
Bonds of $50,000 and below	11.5% serial
Bonds greater than $5.000	32 % serial

The bond issues of the larger districts show the greatest tendency toward the serial form. The smaller issues are characteristically term issues.

An analysis of bonded debt by counties reveals an interesting situation as shown in the accompanying table.

CLASSIFICATION OF BONDED DEBT BY COUNTIES
Percentages of Total Amount Issued

County	Serial	Optional	Term
Pima	96.2	3	.8
Santa Cruz	90	4	6.0
Cohise	59	33	8
Greenlee	41	29	30
Gila	34	55	11
Navajo	28	0	72
Pinal	24.2	72	3.8
Yavapai	15	0	85
Maricopa	6	0	94
Yuma	1	0	99
Graham	0	90	10
Mohave	0	87	13
Apache	0	32	68
Coconino	0	0	100

Practices followed by counties in issuing bonds show extreme variations. Each type of policy is followed almost exclusively by one or more counties while several show no pronounced tendency. The two counties having the greatest indebtedness are found at the two extremes of this distribution. Maricopa with the largest indebtedness in the state has 94 per cent of her debt in the form of term bonds while Pima with the next largest debt has 96 per cent of her debt in serial bonds.

It becomes important, therefore, to inquire into the respective merits of the different types of bonds. If there is little advantage accruing to any one type, it is proper that each county and district should be left to itself in determining the type of bond as at present. If, however, it is found that any one type is more economical, more equitable in the burden upon taxpayers, more certain in its retirement and safer in its administration, then that type of bond should be required of all districts by legislative enactment.

Term Bonds and Their Advantages

Term bonds are retired at maturity by a single payment. This payment is usually provided for through the accumulation of a sinking fund over a period of years, the annual contributions to the fund being so arranged that the fund with its accumulated interest shall exactly equal the principal of the debt at maturity. This sinking fund may begin immediately, thus spreading the burden over the entire period, or, the beginning of the fund may be put off a number of years, thereby concentrating the burden over a shorter period.

One of the advantages of the sinking-fund method is found in the equal annual payments to the fund which thus become a constant item in the budget. Theoretically this advantage exists but practically it is difficult to maintain. Sinking-fund calculations are complex and are based on several assumptions. The funds must be invested promptly and carefully watched. Accounting methods involved are complex and require a quality of bookkeeping which is sometimes lacking in public office. Experience has shown that the funds rarely work out according to calculation, and deficits or surpluses are usually present. An investigation of sinking funds in Massachusetts municipalities showed 40 cities and towns with sinking fund deficits of $1,794,391 and 47 cities and towns with a surplus of $2,855,192.[1]

Theoretically the sinking fund may be invested at rates of interest equal to the interest rate paid on the bonds. If this were so, the accumulation of the fund would offset the bond interest and the growth of the fund would represent the extinguishment of the debt so far as net charges to the borrower are concerned. Practically, this does not work out. Five per cent is a moderate charge on bonds while authorities state that three per cent is a good average for sinking fund earnings.

The School Boards Invariably Lose

In Arizona sinking funds are usually deposited in banks and draw a maximum of four per cent. In a very few instances these funds have been invested in the bonds of other districts, thereby drawing as much interest as the debt incurred. This is a very commendable practice where it can be safely carried out but such manipulation of public funds by popularly elected officials is likely to lead to unwise investment and to depreciation in the fund.

The interest rates paid on bonds in the state are shown in the following table.

INTEREST RATES OF BONDS ACCORDING TO CLASSIFICATION

	Percentages		
Interest rates	5%	5½%	6%
Term bonds	18%	21%	61%
Optional bonds	15%	29%	55%
Serial bonds	16%	8%	76%

While the sinking funds of practically all districts are drawing between three and one-half and four per cent interest the majority of all bonds are paying six per cent. In effect, therefore, districts following the term-bond policy are paying two per cent for the privilege of using that form of bond due to the fact that they are giving six per cent to bond holders and receiving only four per cent for money held in the bank and which should be used to pay off bond principal.

One of the most serious objections to the term bond and the sinking-fund plan has been found from costly experience to be the danger of misappropriation of interest on the fund, or loss of the fund itself through dishonesty, unwise investment, carelessness or ignorance. An example of this is found in the case of Mississippi which had a sinking fund of some $800,000 in 1839. Through mismanagement and through depreciation resulting from bad investments this fund had depreciated to approximately $100,000 by 1848. "It is notorious that sinking funds, municipal and corporation, are appropriated for other than the use for which they are instituted."[2]

Sinking Fund Diverted

This abuse is present in Arizona with regard to interest earned by sinking funds. The state law requires that such interest shall be credited to the district owning the fund, yet in six counties we find the interest diverted to general county purposes. The county treasurer is the custodian of the fund and frequently deposits all sinking funds in one general account, crediting the interest to the general county.

The significance of this practice may be grasped from the following facts.

1. Interest earned by sinking funds at four per cent when built up over a period of twenty years amounts to $34,000 on a $100,000 issue.

2. Interest earned by sinking funds when built up over a ten-year period at four per cent amounts to some $17,000 in round numbers.

[1] American Economic Review, Dec., 1913.
[2] Chamberlain, "Principles of Bond Investment," p. 213.

3. The total interest earned by sinking funds during the life of the bonds, in those counties where interest is diverted from the schools to the county, will amount to $800,000 or up to $1,750,000, depending upon the manner in building up the fund.

Maricopa county with the highest bonded debt in the state furnishes an outstanding example among the counties where interest is diverted. With $3,600,000 in term bonds, Maricopa school districts will lose between $650,000 and $1,300,000 due to the diversion of interest earned by their sinking funds.

The effect of this practice is to levy a special tax upon districts having sinking funds, since the interest is not applied to their debt charges, and special tax must be levied to make up the deficiency. It is possible to prevent such loss through closer state supervision, but the simplest method would be to do away with sinking funds as in the case of serial bonds. The abolishment of the sinking fund would not only remedy this abuse but would simplify the duties of officials charged with the care of such funds.

An additional disadvantage of sinking funds is found in the tendency to postpone contributions, thereby concentrating the tax burden over a short period, and, the still more undesirable practice of refunding is liable to appear in such cases of postponement.

Other Disadvantages of System

The Arizona law stipulates that sinking funds must not begin later than the middle of the term for which the bonds are issued, and, that in such case the burden must be distributed equally over the remaining period. Since the maximum term of school bonds in the state is twenty years, the sinking fund may be concentrated over a period of ten years at the option of the county officials. Whether or not this tends to be the policy in Arizona is revealed from a study of existing sinking funds.

For a total of $5,341,300 term bonds for which sinking funds could be segregated according to year of issue, a fund of $321,362 has been provided, or six per cent of the debt. If the burden is to be equally distributed over the period of the issues, the fund should contain approximately $1,640,000, or 30 per cent of the debt. On the other hand, if the tendency is to concentrate the burden over the ten-year period the fund should contain some $280,000. We find from these figures that there is actually in the fund some $40,000 above the ten-year requirement.

In actual practice, therefore, the sinking fund is only one sixth of what it should be if the burden is to be equally distributed. The condition of the fund indicates that districts are postponing the levying of funds as long as possible, and that the burden of the debt will be distributed over a short ten-year period.

When the issues of earlier years are segregated we find that the issues from 1907 through 1912 have only 80 per cent of the fund needed even on the ten-year basis, and an actual deficiency therefore results.

The effect of this postponement of sinking fund contributions is to conceal the real cost of education. Districts go on borrowing blindly without due consideration of the burden of repayment because they have not yet felt the weight of existing indebtedness. When the time comes for the levying of these funds there will be a tendency on the part of taxpayers to suspect extravagance and lack of foresight on the part of school officials because of the sudden rise of tax burdens.

Political officials will continue to put off the levying of sinking funds as long as possible in order to maintain a record of low taxation. The result of such a policy will work an injustice to schools because a greater amount than necessary will be deducted from current revenues due to the concentration of the debt burden.

The pinch of such a situation has already been seen and the first palliative provided by legislature is in the form of a law permitting the refunding of debts with the provision that refunding bonds must be serial in form.

The term-bonding policy and the neglect of sinking funds has thus brought about the very undesirable practice of refunding, but the practice of continued refunding has been made impossible by prescription of serial bonds for such purposes.

Abuses Are Inevitable

The abuses of the sinking fund which appear in Arizona are in no way unusual but are inherent in the very nature of the term bond. Experience in other states has shown these difficulties to be quite general wherever term-bonding policies are followed. Conclusions as to the undesirability of this type of bond for school financing are borne out by various investigations, which are reflected in the opinions of current authorities quoted below.

Lawrence Chamberlain, one of the best authorities, writes in his book, "Principles of Bond Investment":

"The sinking fund principle, whether applied to government, state, municipal, or corporation issues is wasteful, and renders a fund liable to depletion by misappropriation, embezzlement, and other fraud, and to depreciation in its investment" (p. 152).

"It is notorious that sinking funds, municipal and corporation, are appropriated for other than the uses for which they were intended" (p. 213).

"Sinking funds are not only liable to misappropriation, unwise investment, suspension and the like—but they are costly. Their average earnings are a little over three per cent. Serial bonds require a minimum of expense and produce a maximum of safety. When a bond issue is serial the investment grows safer as it grows older" (p. 216).

"The best way to sink a debt is to pay it; the surest sinking fund is payment. A few of the younger states have set a much-needed example to the older by adopting the serial method of payment" (p. 153).

Fraser Brown, in *Municipal Bonds,* says:

"The difficulty with the sinking-fund plan is that it is seldom carefully followed. Sinking funds have been notoriously misused for purposes absolutely foreign to their object" (p. 76).

Kirshman, in "Principles of Investment," writes:

"On account of abuses in the past, especially in the case of small municipalities certain states among which are New Jersey, New York, North Carolina and Massachusetts to mention only a few, have discontinued the sinking fund for new issues and are replacing them by serial bonds. The serial-bond method is almost in every way superior to the sinking-fund method. It insures cancellation of successive portions of the debt each year until it is all paid at the most distant maturity date. The serial method acts as a constant protection to the credit of the municipality and there can be no doubtful methods of handling sinking funds to worry about (p. 417 et seq.).

Serial Bonds are Cheapest

"The serial form provides the cheapest way to liquidate a debt" (p. 417).

Lorin C. Powers, formerly of the Philadelphia board of education, writing in the SCHOOL BOARD JOURNAL, on "Serial Loans" in July, 1916, said:

"Judging from the experience of Massachusetts, sinking funds have failed of their purpose in the hands of public officials. More and more the idea is growing that communities should pay their debts as soon as possible, for experience has proved that the taxpayers of each generation have sufficient burdens of their own without being obliged to carry those of their predecessors."

Charter Commissioner of New York City in its report said some years ago:

"The theory of sinking funds as security for the payment of public debts has become obsolete. This commission favors the abolition of all sinking funds. Great as the problem of refunding would be, it would be wise to attempt it and eliminate all sinking funds for the future. From every point of view the perpetuation of the sinking fund system is unnecessary and costly."

A Bankers' Resolution

Investment Bankers' Association of America, in resolutions adopted at its annual convention (p. 80, proceedings) for 123, said:

"Be it resolved by the Investment Bankers' Association of America—that this association recommends that all bonds should be issued to retire serially in preference to sinking-fund bonds."

N. L. Engelhardt, in his book on "School Building Programs" (p. 117), quotes the New Jersey Commission for Survey of Municipal Finances as follows:

"Bondhouses, investors and the officials of municipalities who have given the matter serious thought, recommend serial bonds for the financing of debt obligations. The favorable price at which serial bonds have sold in the past few years proves their economic market value and adds conclusive proof to the favor that this form of bond has with the buyers of municipal securities.

"The serial plan does away with all the perplexities and risks of collecting, investing, and safeguarding the sinking funds. It eliminates the long chain of 'ifs' that are present in the sinking fund plan. It provides a means of financing public obligations with constantly decreasing carrying charges and will go a long way to putting municipalities on a pay-as-you-go basis.

"The serial bond embraces all the principles of sound financing, simplifies the administration of public affairs, and will prove a most efficient means of doing away with the refunding bond."

Opinions Borne Out by Figures

Quotations similar to the above, showing the disadvantages of the sinking fund and the superiority of the serial bond, might be continued indefinitely. Enough has been given, however, to indicate a unanimity of opinion on the subject, among leading authorities. Serial bonds stand out because of the automatic and certain retirement of debt and because of the absence of a sinking fund which is subject to so many abuses. Above all, the serial bond is decidedly cheaper than the other types due to the difference in interest rates on sinking funds and on the bonded debt. The significance of this difference in cost is well illustrated by an inspection of figures for Arizona.

The difference in cost between serial and term bond issues figured at prevailing rates for Arizona are as follows:

1. Cost of 20-year, 6% bonds for $100,000:
   a) Serial $163,000
   b) Term 220,000

   Difference in favor of serial bonds.. $ 57,000
   This difference is the actual difference in cost in the six counties where sinking fund interest is diverted from the schools.
2. Interest earned by sinking funds accumulating at 4% for above issue.
   a) Built up over 20 years..... $34,000
   b) Built up over 10 years..... 17,000

When interest earned by sinking funds is credited to the term bond there is still a difference of from $23,000 to $40,000 in favor of the serial plan.

Note: The figures given are estimates in round numbers. They will vary if a different number of payments are made to the sinking funds. Where interest earned is diverted and the entire principal is raised by contributions the interest earned and lost will amount to $38,000 instead of $34,000. The figures are sufficiently accurate, however, to serve the purposes of illustration.

The significance of the difference in cost of the various types of bond to the taxpayer is evi-

(Continued on Page 154)

THE AMERICAN
School Board Journal

WM. GEO. BRUCE
WM. C. BRUCE } EDITORS

EDITORIAL

SCHOOL-BOARD SERVICE AND PUBLIC APPRECIATION

There are periods in the career of a member of a board of education when keen regrets assert themselves. Those who strive for expeditious deliberation and decisive action, as well as a reasonable amount of harmony, become extremely uncomfortable when acrimonious contention follows in the wake of their efforts. Then, too, the conscientious public official soon discovers that ingratitude is one of the emoluments of a public career.

There are communities where every board-of-education act is sharply criticized and where citizens seldom come to the realization that somebody is performing a patriotic service and is entitled to commendation instead of condemnation. Just as individuals may get into an irritable mood, so communities may become restive and critical, and find fault with everything that is being done for them or their children.

But, there are exceptions. The American people, as a rule, do not mean to be ungrateful. In fact, if somebody starts the ball rolling in the right direction popular acclaim usually follows. Thus, we find an incident which recently transpired at Evansville, Indiana, and which demonstrates the point at issue.

A local banker, named Charles B. Enlow, retired as a member of the board of education after ten years of loyal service. Some one was thoughtful enough to measure his contribution to the school system. The various departures engaged in by the board and the splendid progress which had been attained were enumerated. And then it was discovered that Mr. Enlow had earnestly championed all that made for the increased efficiency and the prestige of the school system.

A testimonial dinner followed, and a silver loving cup, suitably inscribed, was presented to the retiring member. The appreciation which had been so well earned was sincerely expressed. The community was better for having realized what service it had received gratuitously and for having expressed its gratitude.

There is behind it all, however, another thought, namely, that in affording a public expression on a laudable public service the community secures a higher conception of the duties of American citizenship. It is not merely a matter of lauding the acts of a man, but it is the appreciation that unselfish service is one of the finer privileges of American life and living.

Those who give liberally of their time and effort to the training of the youth and to their preparation for the duties of citizenship are making a real contribution to the stability, the perpetuity and glory of their own country. No more important service could be rendered to the Republic in which we live than through earnest, loyal, and capable school-board membership.

TEACHER TARIFF-WALLS TO PROTECT HOME TALENT

Among the immediate results of the teacher surplus are the measures taken in some states to protect the teachers therein against the influx of outside talent. The purpose is to encourage the employment of teachers who have secured their training in the state and to discourage those who have been trained outside of the state. In brief, it is the intention of the state school authorities to encourage the employment of local talent.

The state board of education of the state of Washington has placed itself definitely on record as being opposed to the employment of teachers who have secured their training outside of that state. A new rule which was unanimously adopted by the board provides that:

"Those who desire a certificate to teach in a public high school shall attend either the State College of Washington or the University of Washington; those who desire a certificate to teach in a public elementary school shall attend one of the Washington state normal schools."

In defense of the new rule, Mrs. Josephine Corliss Preston, state superintendent, has issued a statement which is to the effect that:

"The state board has found it necessary to take steps to protect the graduates of the state educational institutions of this state, due to the fact that undue preference is given in our certification law to graduates of outside institutions. Several hundred teachers who are graduates of our own state institutions are now without employment and the preference in positions should be given our own graduates."

It is a grave question whether this sort of thing is really wise. If character and fitness must guide in the selection of teachers, then restrictive rules are entirely illogical. The educators themselves have for many years not only fought against such rules, but have stood out boldly against political or local considerations in the selection of the professional workers. They have held that preference can be accorded to local talent only when such talent is on a par with the outside applicant in the essential qualifications.

No educator of standing has as yet challenged that policy in the selection of teacher talent. The evil which was more prevalent years ago, and which sought to give Mary Ann a job as teacher in the local school system simply because her uncle was an influential taxpayer, and not because she possessed the requisite qualifications for the job, did more than anything else to lower the standards of the American schools.

There is, however, another phase of this subject which should be borne in mind. In this country the relations between state and state are free from restrictions. Tariff walls are unknown to interstate commerce. An outside corporation may be obliged to secure a license to do business in a given state, but such restrictions contemplate regulation of commercial pursuits and the protection of the public. Frequently, too, they are administered in the nature of a tax. But, no state would attempt to rule out the commerce of another state by adopting prohibitive measures.

The interests of the several states are necessarily mutual and reciprocal. The products of Washington must find a market beyond its own borders if the agricultural, industrial, and commercial interests of that state are to prosper. Nor would Washington dream of shutting out Massachusetts products any more than Ohio would want to shut out the products of New York state.

The good people of the state of Washington would not dream of barring a lawyer, physician, clergyman, or engineer because he happened to be educated in some other state. Nor would they like the idea of having teachers barred from California, Oregon, or Montana simply because such teachers had been trained in the state of Washington.

Fortunately the educators of Washington are not of one mind as to the practicability of the rule. Supt. Orville C. Pratt of the Spokane schools, on being asked his opinion, said the following:

"I do not regard this as a good thing. The schools would be better served if free to select teachers where they can get the best in the profession. Many times we are unable to find special types of teachers in the state schools. We are much more apt to get the best if we are not limited as to field of selection. All things being equal, we give the preference to graduates of our own schools. We take all of the Cheney graduates who are recommended highly to us. We get about one-third of our teachers locally, and about two-thirds from the outside. The new rule simply means that we must take some teachers we wouldn't otherwise take. Since the schools exist for the children, it seems to me there ought not to be any such regulation."

A procedure which is unsound in principle, narrow and selfish in spirit, and at the same time harmful in practical results, is not likely to find emulation in other states. Washington cannot afford to engage in foolish business. Commercial tariff walls may be built to shut out foreign competition, but tariff walls cannot be consistently raised by one state to shut out the educational offerings of every other state within our own country. The state of Washington owes something to the rest of the country. Many of her best people were educated at the expense of other states.

AN ORGANIZED MAJORITY IN SCHOOL-BOARD DELIBERATION

One of the evils which has manifested itself in recent years consists of an organized majority in school administrative deliberation. Members of a board of education have been elected upon an issue which arrays them into a majority or minority group, or they have through personal prejudice and animosity resolved to oppose the measures fostered by certain other members. Sometimes the grouping derives its impulse through partisan methods employed in the election of the members.

Thus, there are boards of education in various parts of the country whose membership is avowedly split into majority and minority factions. The public press complacently reports that the majority has decided to do thus and so and does not propose to let the minority in on its plans. Its deliberations are carried on with an unanimity that renders the minority a mere group of bystanders. This tendency not only manifests itself in the larger school bodies but even in three-member organizations.

The school board of Kirkland, Washington, offers a striking case in point. The following paragraph taken from the Kirkland *Journal* tells the story:

"One of the most important problems that comes before the board is the selection of a superintendent and in this matter the majority admitted that they had selected J. A. Jacobson, weeks ahead of the board meeting without so much as giving the minority member of the board an opportunity of looking into his qualifications, in fact only by rumor did he know who had been agreed upon. Such positive assurance had been given the new superintendent that he moved into Kirkland weeks ahead of the school-board election. This fact in itself has started a wave of criticism that will put the new superintendent under a heavy handicap to start with, this coupled with the ever persistent rumor that the selection was dictated by the county superintendent of schools, for reasons other than for the good of the schools makes it doubly difficult for Mr. Jacobson, even though the rumor may be without foundation."

But, there are larger communities where a similar situation prevails and where the public sentiment apparently sustains this partisan spirit. In situations of this kind it only follows that in the contest between faction and faction the real interests of the school system be-

come a secondary matter. Let one side propose a new schoolhouse, the appointment of a superintendent, or the adoption of a course of study, and the other will be sure to take an opposing attitude. The merits of a proposal become secondary to the idea of group supremacy.

There can be but one conclusion on this sort of thing. The schools are not conducted for the purpose of enabling school-board members to settle scores between themselves. Nor are they conducted for the purpose of affording distinction to those aspiring for political preferment. School boards, schoolhouses, teachers, and janitor are instituted for one purpose only, namely, the mental, moral, and physical welfare of the child.

No citizen can consistently sit as a member of a board of education by representing a faction, clique, or group within or without that body. Nor can such citizen member hold that he or she merely represents a district or faction of the community. Every member represents an entire community and must work for the interest of all the children therein. Every proposal and project, every departure or innovation must be voted upon in the light of its merits regardless of the proponent or the personal relations between member and member.

The member of a board of education who would live up to the finest traditions of his office must be able to lift himself out of all animosities and personal considerations. He must learn to support the measure proposed by an enemy if it is meritorious, and to deny the request of a friend if it is unworthy. The clique spirit in school administrative service can only prove detrimental to the interests at stake. A majority vote may carry a worthy measure, but an organized majority is determined to carry every measure that emanates from its body whether it be worthy or unworthy.

OLD AND NEW METHODS OF TEXTBOOK ADOPTIONS

The old-time method of textbook adoptions was subject to much controversy and to even vexatious scandal. The evils which arose were due to the fact that the nonprofessional factors of a school system attempted to perform a professional task. Members of the board of education listened to the arguments presented by bookmen in favor of this or that textbook and then proceeded to vote on the textbook that was to be used by teachers and pupils.

In the evolution of school administrative effort during the past quarter of a century a clearer division between the business and professional has been reached. A well-ordered board of education now looks to the professional worker to select the professional tools to be employed in the schools. The assumption is that the teacher who constantly uses textbooks ought to know more about textbooks than the man who spends his time in a business office or within the walls of a factory plant.

It is interesting to note, however, how the echoes of a former day, with its shortcomings and evils, assert themselves even in a modern day. The nonprofessional will invade the domain of the professional. An interesting textbook contest has come to light in Springfield, Missouri, recently which illustrates the old-time tendency.

The selection of an arithmetic was under consideration. Nineteen texts were presented by the several publishing houses and referred to a committee of teachers conversant with arithmetics. The committee proceeded to its task in an orderly manner reducing, by a process of elimination, the number of texts to seven. These seven texts were subject to a scientific scoring with the result that one book was recommended to the board of education for adoption.

So far the procedure was in keeping with the best method known on the subject of textbook adoptions. But, there was the member of the board, the unprofessional factor, who was not satisfied. There was the bookman whose textbook lost out. The latter proposed a different method for the selection of textbooks. The former contended that the superintendent had influenced the committee. Again, the book recommended would cost more money than would some other book. Besides, the distinguished school-board member had notions of his own as to the relative merits of the several arithmetics that had been submitted. By raising objections and resorting to parliamentary tactics he sought to defeat the committee report. The snarl had to be unsnarled by proving that the superintendent had not influenced the committee and that the latter had performed its work conscientiously and completely.

Where a book contest of this kind is staged, it is refreshing to find a local newspaper editor who has the correct slant on a situation of this kind. The editor of the leading Springfield newspaper sums up the whole matter in the following manner:

"There is little doubt in our mind that the line of demarcation between a superintendent's duties and a school board's duties is sharply etched. A superintendent should have the absolute control, and absolute loyalty as well of his teaching organization, of the functioning of the system routine, of all matters bearing on the actual day-by-day running of the schools. Choice of textbooks naturally falls within his educational and directive province. If a superintendent cannot measure up to his job, then it is clearly up to the board to find another. But there should be no compromise; the board should not endeavor to do the superintendent's work for him. Give him rein, or let him go, and get someone to whom the reins can be intrusted.

"The board itself should be a court of appeal and its hilltop survey broadgaugedly the workings of the system, without interference but with keen eye to the attained result. If that result proves unsatisfactory, there can be but one answer: a change of administrative control. But, assuming that the board is satisfied with its superintendent, and we haven't slightest cause for thought to the contrary, then all matters of detail, which cause the board anxious hours and calamitous verbal waste, should be hung squarely upon his shoulders."

This is a sensible conclusion on the scope and function of the administrator of a school system and that of the legislative body. The adoption of textbooks comes clearly within the province of the professional factors and the judicious board of education member has long recognized that fact.

ONCE MORE THE PROBLEM OF A TEACHER SURPLUS

Some months ago it was pointed out in this publication that a surplus of teachers had been created. In order to establish the actual status the several state-school officers were requested to give estimates as to the number of those who had been trained to teach but remained unemployed. The schoolmen were inclined to be reticent in the matter.

Enough information was gained, however, to establish the fact that thousands of teachers throughout the country were out of positions. The number of those who had graduated from the several normal schools and teachers' colleges exceeded by far the number that could be absorbed in the schools. The tendency is to seek engagement in the larger cities and to forego the rural districts.

The report comes from Chicago that there are 2,000 more public-school teachers in that city than there are positions for them to fill. The same relative situation is found in other large centers of population. In attempting to arrive at a solution, the Chicago *Tribune* says: "The oversupply, which appears to be on the increase, is causing some anxiety to the school administration. A number of proposals have been made to meet the situation. One of them is to grant each teacher the right to take a year's leave of absence for travel and study every seventh year. The proposal is not a bad one. It need add nothing to the cost of running the schools. The plan deserves consideration, not as a means of employing more teachers, but as a means of improving the quality of the teaching."

The solution here offered is, after all, a mere subterfuge which cannot in the nature of things prove either practical or acceptable so far as the country at large is concerned. Those who have devoted time, effort, and money to prepare for a professional career cannot be expected to engage in pleasure trips in order to give some one else a chance to be employed.

The solution must be sought in a regulation of the supply of teaching ability rather than in a plan by which the available jobs are divided around among those willing to fill them. The crowding toward the larger cities usually finds its own adjustment. The surplus follows the lines of least resistance, which means that rural districts secure their quota of teachers. The Chicago *Tribune,* in commenting upon this phase of the subject, makes two excellent points, namely, one that the solution cannot consistently be found in a salary reduction, and another that the profession is not an undesirable one. It says: "We cannot see that the oversupply of applicants for positions need cause any worry. No one is obliged to teach school in Chicago. If there are more applications than positions, it is a welcome indication of the desirability of positions in the Chicago school system. Old-fashioned employers would say that under the circumstances lower salaries would be justified. We do not share that view. We believe that teaching positions should pay well enough to attract men and women of intelligence and character. At the same time the great demand for teaching positions in Chicago is an effective answer to those who insist that the teachers here are abused, greatly underpaid, and discontented."

The editor then gets down to the essence of the problem by saying:

"The economic loss involved in the idleness of many hundreds who are waiting for a chance to teach can be met in large part by raising the standards of admission and scholarship in the normal school. Too many teachers are being turned out. The place to halt the oversupply is at the source, as it is also the place to select the best teaching material. It should be made more difficult to enter the Chicago normal school and more difficult to stay in, once admitted. At the same time, the examination of applicants for teaching positions who were trained in other schools should be made correspondingly severe."

What applies to Chicago applies to the rest of the country. To attempt a regulation of the supply and demand through a reduction of the salary schedules would prove a grievous mistake. If the test of capability in teacher service were rigidly enforced, it would be found that there is in reality no teacher surplus. An elimination of the unfit might reveal a deplorable teacher shortage.

Thus, as has frequently been stated, the solution must be found in holding to higher standards and in bringing greater efficiency into the school service of the land. And if high-class service is to be exacted, it means, too, that an adequate compensation must prevail.

Ten Fundamentals of Unit Ventilation and Their Application[1]

A. J. Nesbitt, Atlantic City, N. J.

Very little is generally known of the early development of the unit system of heating and ventilating and a brief survey of this subject unearths some interesting facts. To Messrs. Castor, Collins, and Hubbard belongs the credit for having conceived the idea of ventilating schools and other buildings by means of the unit system. To Moses Hubbard belongs the credit of having designed the first practical mechanical ventilating unit, incorporating the fundamental principles that have made this system popular.

Hubbard's first unit made in 1908, Figure 1, was known as the "Monarch," and in form and configuration the casing resembled an upright piano.

Although four other manufacturers designed and constructed mechanical ventilating units, incorporating the same principles, all employed the same general shape and configuration as that of the Hubbard design, until 1922.

Within this form, like a casing of a piano, Hubbard enclosed the following principal elements: (1) A motor and fan assembly; (2) a radiator; (3) humidifying means.

Hubbard's patent drawings, Figure 2, show the relation of these various elements, as follows:

1. A fresh-air inlet at back, near top of cabinet, lead to a motor and fan assembly, consisting of a one-sixth horsepower direct-current motor and two multiblade fans enclosed in steel housings, located at the top of cabinet.

2. The heating surface consisted of nine sections of cast iron extended surface, aerial radiation on 4½-in. centers, having about 8 sq. ft. of radiation to a section, being an adaption of the aerial radiation design by John Cassell.

3. The so-called humidifying apparatus consisted of a water pan in the base of the unit, so arranged that the air, after being forced through the radiator, came in contact with the water surface.

4. The discharge chamber was vertical and parallel with the radiator and was provided with an outlet at its top. No by-pass chamber or damper was provided. Access to the motor-and-fan assembly was through the top of cabinet and similar access to the humidifier was at base of cabinet.

Hubbard built the "Monarch" unit in capacities ranging from 300 cu. ft. to 1,500 cu. ft. of air per minute and many of the first installations of the system were made in the state of New Jersey, one notable example being in the Massachusetts Avenue School, Atlantic City.

Notwithstanding the fact that the Hubbard device did not have many features, now considered essential, the success of this new idea in ventilation was spontaneous and continuous. Today over 5,000 public-school buildings use the unit system. The fact that a device, constructed as the Hubbard device was, could make such phenomenal progress demonstrates the soundness of the fundamental principles upon which it was based.

The vertical discharge at high velocity is the first fundamental principle of unit ventilation. Research has demonstrated the now well-known fact that ventilation is not alone a question of air volume. Correct air motion and diffusion are equally important. Volume alone, without correct air motion, cannot produce proper results. Volume means only that the air is being delivered to the room. Proper diffusion means the air is being delivered to the occupants of the room. Correct air motion, or thorough diffusion as produced by this system, is the result of a high velocity at the discharge outlet, properly controlled to prevent drafts, but

[1]Abstract of paper presented to the Am. Society of Heating and Ventilating Engineers, June, 1927.

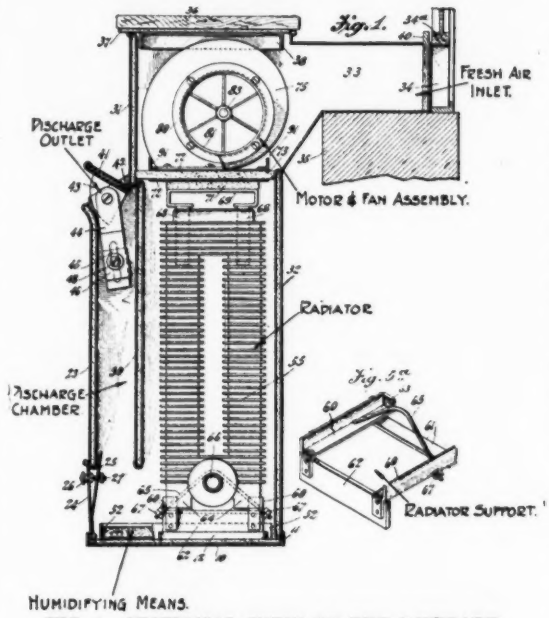


FIG. 1. SECTIONAL VIEW OF THE HUBBARD ORIGINAL DESIGN.

capable of causing thorough air motion.

High velocity is the first fundamental principle of unit ventilation, the high-velocity vertical discharge resulting in better air motion. This principle has been incorporated in all devices of this type, since the origin of the system.

Since ventilation is a process of diluting the foul air within the room with fresh air, it is obvious that the system, capable of giving the best diffusion, is the one in which the percentage of foul air to leave the room will be the highest. Anyone who has conducted smoke tests on this type of equipment probably has been impressed with the diffusion results. The smoke rapidly fills all parts of the room, leaving no dead-air pockets.

During some recent tests, conducted in Minneapolis, Minn., by the assistant superintendent of schools in charge of business affairs, in which the writer took part, care was taken to time the smoke circulation and the following results were recorded:

A smoke bomb was set off at the inlet to the unit at 12:54. At 12:54:30 or 30 seconds later the smoke had reached the two side walls. At 12:54:45 or 45 seconds from lighting the bomb both side walls and back wall had been reached at all points. At 12:55:50 or 1 minute and 50 seconds from starting time, the entire room from side walls to back wall to floor surface was covered with smoke.

The room was a standard 40-pupil room with 8,100 cu. ft., and these results were produced with a unit delivering 1,170 cu. ft. of air per minute at an average velocity of 744 ft. per minute.

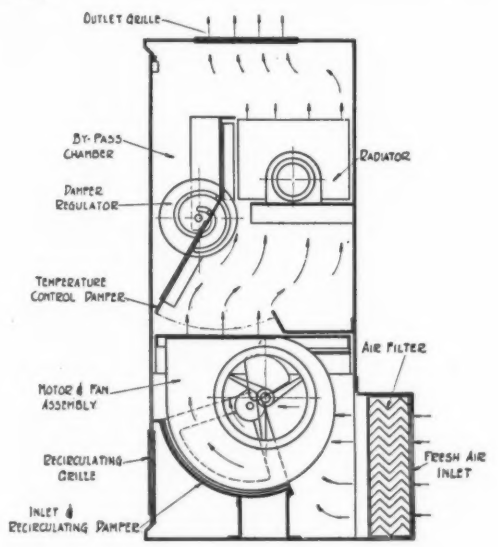


FIG. 2. SECTIONAL VIEW OF A PRESENT-DAY UNIT.

It is the writer's belief that these results could not be equaled by an air delivery of 1,500 cu. ft. of air per minute in the same room with low-velocity horizontal discharge.

Positive distribution is the second fundamental principle and follows air motion in importance. Positive distribution of air under all weather conditions is accomplished with an individual ventilating unit for each room, capable of delivering a definite quantity of air. As the air supply for each room is absolutely independent of the air supply for any other room, no action outside of that room can effect air delivery. Thus, the scheme of distribution cannot be disorganized through the raising of a window or other similar action, or through a change in wind direction, or pressure.

Temperature control is important and necessary. Because each room has a complete unit and each unit is provided with a temperature-control damper, automatic temperature regulation can be applied to regulate the temperature of air entering each room, based on the temperature of that room.

With the unit system the air comes directly from outdoors, is cleaned by air filter before being heated, and distributed. All parts of the cabinet are accessible for cleaning and long passages through wall ducts or flues are not necessary.

Economical results are obtained as it is only necessary to operate the equipment in that part of the building which is occupied, thus effecting a saving in rooms not in use. Because each room is provided with a complete unit it is unnecessary to run the entire ventilating system, if only a few rooms are in use.

Quick heating is accomplished, for closing the fresh-air damper opens the recirculating grille at the floor line so that there is a free path for the air to circulate by gravity through the radiator. Thus, when the motor is not operating and the fresh-air damper is closed, the radiator of the unit becomes an inclosed direct radiator, functioning in the same manner as any other inclosed direct radiator. By starting the motor during the heating-up period in the morning, the air may be drawn from the room at the floor line, heated, discharged, recirculated, reheated, and redischarged, this process continuing until the room has reached the desired temperature.

There is no loss of heat in conductions of air, as all heat units given off by the unit are used to heat the room wherein the unit is installed.

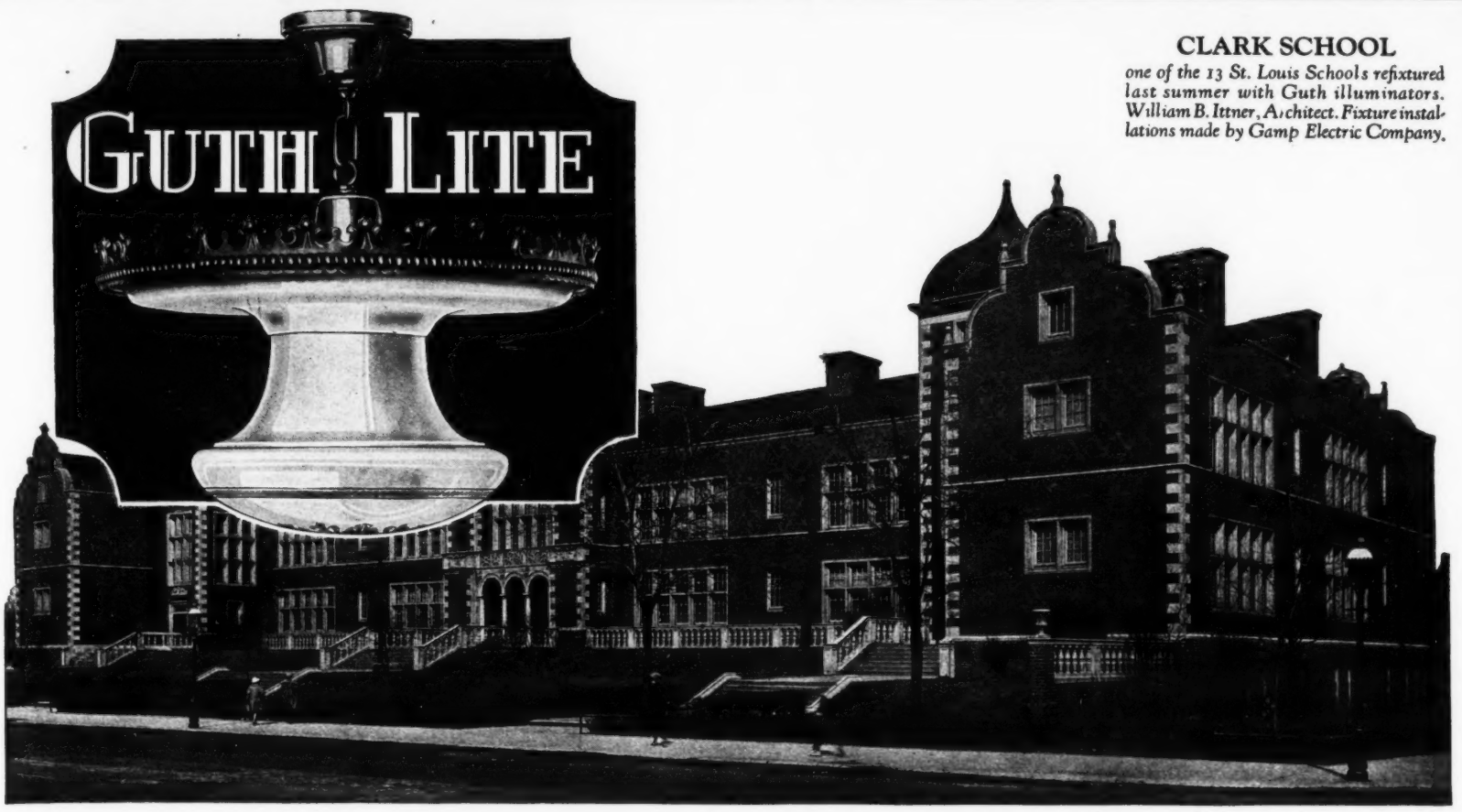
Since the discharge outlet of the unit is only a distance of 40 in. from the inlet, there is no friction or long run of ducts against which the fans must operate; therefore, the maximum static pressure against which the fans operate is only 0.198 in. water or less than 1/5 in. The cost per 100 cu. ft. of air is lower than with other systems, averaging 10 watts per 100 cu. ft. of air delivered.

Low Current Cost

The motors used for this service are totally inclosed and since they are located in the path of the incoming air, their temperature is always comparatively low. As the fans are balanced on the motor shafts, there is an equal amount of wear on all sides of the bearing. These fans are generally constructed of aluminum, so that, in addition to being an equally balanced load, the fans are also very light. The motors are operated on an average of 6 hours a day for 5 days a week for 25 weeks a year or about 750 hours per year.

Compare this light service with industrial service where motors are used 8 hours a day, 5½ days a week and 50 weeks in a year, allowing 2 weeks for holidays, a total of 2,200 hours per year.

(Continued on Page 72)



CLARK SCHOOL
one of the 13 St. Louis Schools refixtured last summer with Guth illuminators. William B. Ittner, Architect. Fixture installations made by Gamp Electric Company.

Any School Can Now Have Modern Light in this Easy Way

Regardless of the age or type of your school buildings it is a simple matter to completely transform their interiors by replacing obsolete lighting fixtures with modern units. In many cases the moderate expense is entirely offset by the greater efficiency obtained. And the gain to your students is incalculable.

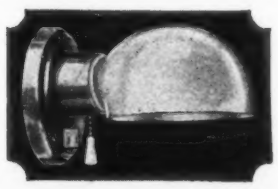
Modern educational methods require modern standards of lighting. The science of illumination has made such strides that equipment supposed adequate ten years ago is now admittedly obsolete. Modern educators consider these facts of the utmost importance in their educational scheme.

Recent surveys show that 25% of school children suffer from defective eyesight. This is directly attributed to improper lighting in the schools and homes. School-failures, backwardness, restlessness and permanent injury are the natural and costly sequence.

School boards owe it to their children to immediately remedy such an unfortunate condition. Schools in all parts of the country—13 in St. Louis alone last year—are rapidly modernizing their lighting equipment with Guth School-Lighting Units to make sure they have the best possible solution to this vital problem.

We invite you to call in a Guth lighting expert for a scientific, impartial survey of your lighting needs. No cost or obligation whatever is entailed.

The New and Improved
AGLITE
Porcelain Enameled Units



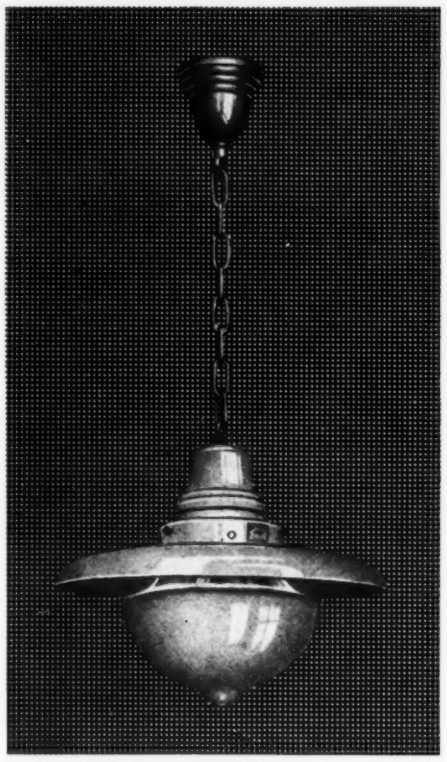

Aglite

The EDWIN F. GUTH COMPANY
DESIGNERS - ENGINEERS - MANUFACTURERS
Lighting Equipment
ST. LOUIS, U.S.A.


Aglite


Brascolite

The deeper you dig into the subject of school lighting the firmer will be your conviction that DENZAR fulfills every requirement of classroom illumination.



PENDANT TYPE DENZAR
FOR HIGH CEILINGS

This has been the experience of thousands of school officials and as a result DENZARS are found today in grade schools, high schools, and colleges in all parts of the country.

This ideal light for schools is made in various sizes in both plain and ornamental types. It gives a quality of illumination that is peculiarly restful to the eyes — a light so perfectly diffused that neither glare nor harsh shadows impair the vision.

We shall be happy to mail you on request a copy of the complete DENZAR catalog or (if you prefer deeds to words) we will gladly arrange to demonstrate the superb quality of DENZAR illumination in any city in which the school authorities are interested in better classroom lighting.



CEILING TYPE DENZARS
FOR LOW CEILINGS

Owing to the perfect distribution of light that is obtained when DENZARS are used for school illumination a saving in current consumption frequently results. And in addition to this is the QUALITY of the illumination—a soft, restful light of ample intensity, but free from glare.

Hundreds of grade schools, high schools, and colleges have installed Denzar to light their class rooms, study rooms, gymnasiums, laboratories, manual training and domestic science rooms, auditoriums, and offices. Contact with so many of these installations has given Beardslee engineers a wide experience in school illumination and has made available a wealth of information on the subject. Any school board, superintendent, architect, or electrical contractor interested in better school lighting may have this information for the asking.

BEARDSLEE CHANDELIER MFG. CO.

219 South Jefferson St. :: :: :: :: Chicago

TEN FUNDAMENTALS OF UNIT VENTILATION AND THEIR APPLICATION

(Continued from Page 70)

Space Requirements

The unit system reduces the building cubage by the omission of fan and heater rooms, heat flues, fresh-air ducts, furred-down ceilings to conceal ducts, and in many instances makes it unnecessary to excavate under floors and frequently results in lower ceiling heights in finished basements.

When the building is properly designed and the unit system given credit for cubic contents saved, the unit system is less expensive to install.

Psychological Effect

The effect of bringing the air in directly from outdoors and discharging it at a point where the teacher can feel the fresh heated outdoor air coming into the room, results in the proper mental attitude on the part of the educators toward the system.

1917 "By-Pass"

The Hubbard form of unit with slight changes continued to be used until 1917 when a new form of unit was designed and manufactured. This new form was provided with means, located within the cabinet, for controlling the temperature of the air.

It will be recalled that the Hubbard form of unit was without means, within the casing, for controlling the temperature of air delivered by the unit. The only way of controlling the temperature of the air was by the operation of the supply valve on the unit radiator. This was not as satisfactory as the by-pass damper, which resulted in a gradual change of temperature, rather than an abrupt change.

Light-Weight Heaters Introduced

Forms of units, similar to these, remained in use until 1922, when the introduction of light-weight heaters and their adaptation to this work resulted in an entirely new form of unit. Here the blower chamber was located in the base of the unit with the air inlet at the back near the bottom of cabinet. The radiator by-pass chamber and by-pass damper were all above the blower chamber.

By locating the radiator above the blower chamber and providing a recirculating grille at the floor line and a damper in the lower part of unit, it was possible to circulate air through the unit, when the motor was not running, making the unit equivalent to 68 sq. ft. of direct radiation. The new form of unit, while much smaller in overall dimensions and requiring less space in the room, had much more heating capacity.

Another step forward in the industry was made in 1923 by the adoption of means for filtering the air by adhesive-impingement-type filter



FIG. 3. EXTERIOR OF THE ORIGINAL UNIT VENTILATOR.

units loaded with a viscous oily compound. The filters were located in the fresh-air inlet to the unit so as to thoroughly clean all air before it entered any part of the cabinet and at the same time to get a uniform air velocity over the full face of the filters.

With the adoption of air filters the unit system was able to eliminate 96 per cent of the dust content of the fresh air. As it has been established that bacteria are carried on particles of dust, consequently the removal of dust from the air also removes the bacteria.

Adoption of Polyphase Motors

Up until 1923, whenever unit equipment was installed in a public-school building, where quiet operation was essential, it was necessary to use direct-current motors. When this character of current was not available, a motor-generator set was installed to convert the current available at the building to 110-volt direct current. This was done because alternating-current motors when applied to unit ventilators with the old method of mounting the motor-and-fan assembly were not sufficiently quiet in operation for this work.

The advantages of the polyphase alternating-current motor in this application were recognized, but the difficulty came in obtaining a motor, which when installed in the cabinet would be sufficiently quiet. Experiments to adapt such a motor to this apparatus were carried on as early as 1917 and for several years thereafter but the results for a long time were always the same. In 1923 this problem was solved for polyphase motors.

When using polyphase current the engineer must be careful to protect the motors against fuse failure which might result in the polyphase motor running as a single-phase motor and burning out. "Time lay" fuses with thermal



Cafeteria in the Union High School, Huntington Beach, California

"Spare no Expense" were the building orders

—And a beautifully appointed school building was erected at Huntington Beach, California —the Union High School, considered by many authorities one of the finest suburban school buildings in the State!

The selection of the floor was quickly made when it was discovered that the brand which had written its impressive record boldly in many of the nation's finest buildings was *surprisingly low in cost and actually bonded against repair expense.*

31,000 sq. feet of *Gold Seal* Battleship Linoleum and Treadlite Tile will assure teachers and pupils maximum floor comfort—the school authorities minimum upkeep and maintenance expense. *Gold Seal* Battleship Linoleum has been installed in all corridors and offices. A more decorative floor of *Gold Seal* Treadlite Tile was selected for cooking classroom, cafeteria and library.

Whether your floor needs are measured in acres or square feet, whether they are elaborate or simple, we have a resilient floor that is exactly suited and an organization of experienced men who will lay that floor to last. For literature, samples, estimates, please write our Department S.

BONDED FLOORS COMPANY, INC.

Manufacturers ~ Engineers ~ Contractors

New York Boston Philadelphia Cleveland Detroit
San Francisco *Distributors in other principal cities*

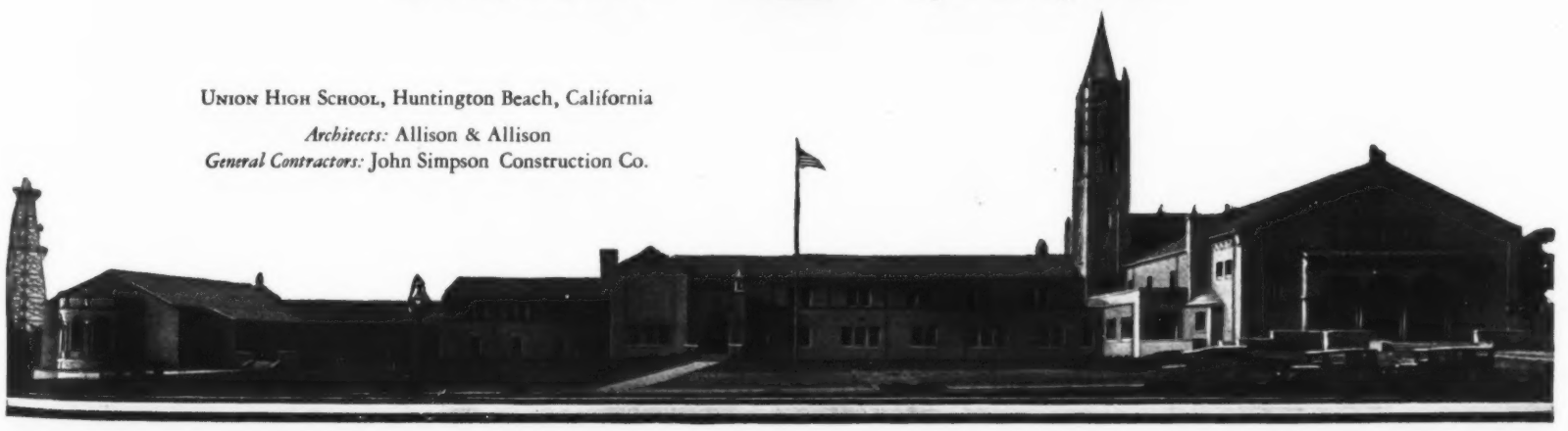
BONDED FLOORS

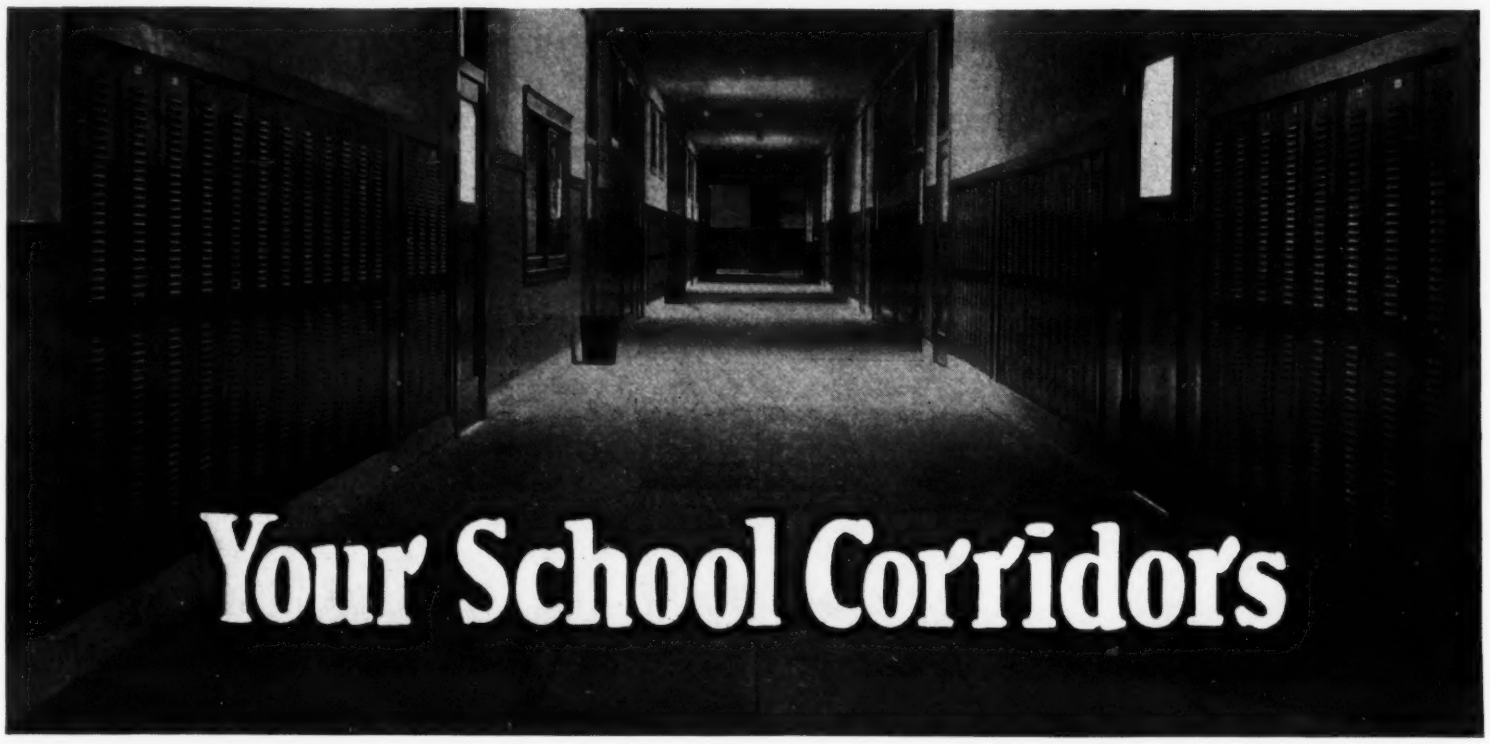
Resilient Floors for Every Need

UNION HIGH SCHOOL, Huntington Beach, California

Architects: Allison & Allison

General Contractors: John Simpson Construction Co.





The modern school is designed and constructed for utility—but there is no reason why equipment, installed for practical, every-day use, should not be attractive, as well as serviceable.

Durand Steel Lockers are made to fit your needs, in a wide selection of sizes and types. Our products continue to merit their reputation for long life and trouble-free service.

If you have a locker problem, submit it to our School Engineering Department for real service that does not obligate you in any way.

CHICAGO
PITTSBURGH
DETROIT
LOS ANGELES

DURAND STEEL LOCKER CO. INC.
1501 First National Bank Building
CHICAGO, ILLINOIS

NEW YORK
BOSTON
NEWARK
PHILADELPHIA

(Continued from Page 72)

element should be used in the branch circuits for this protection.

Adoption of Single-Phase Motors

Closely following the development of the polyphase alternating-current motor comes the development of the single-phase brushless alternating-current motors, and at the same time preventing transmission of the electrical vibrations, is much more complex than that of polyphase. As the electrical noises of all motors originate in the laminations, it follows that the smaller the contact between the laminations and the carrying device, the less possibility there is for the transmission of these electrical noises to the unit casing. Therefore, in mounting a single-phase alternating-current motor it is important to support the motor from the end bells only, and not from the laminations.

There is no justification for the use of a motor-generator set since alternating-current motors are available which are just as quiet in operation as direct-current motors. In the use of the motor-generator set, many of the advantages of the unit system are lost, such as the fact that if only one room is in use, it is necessary to operate each motor-generator set in order to convert current for one ventilating unit. Furthermore, if the motor-generator set should fail, the entire system would be inoperative.

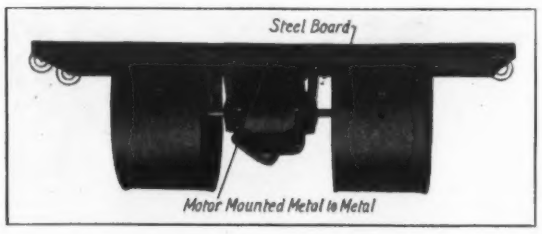


FIG. 4. A MOTOR-FAN ASSEMBLY FOR A UNIT VENTILATOR.

For the purpose of regulating the volume of air delivered by either polyphase or single-phase alternating-current motors, volume regulators are provided in the discharge outlet of the fans. An interesting fact in connection with use of volume regulators is that a reduction in the air delivery results in a reduction in current consumed, in proportion to the reduction in air delivered.

Applications

In the application of the fundamental principles of this system the three most generally used systems are the split system, the modified system, and blast system.

The *split system* is one where the unit is used for ventilation only. The unit delivers the air at required room temperature and a sufficient amount of direct radiation is provided to maintain the desired room temperature independent of the unit. This system is seldom used, for while it is expensive to install, it is no more economical to operate than the modified or blast system.

The system generally used is the *modified system* where only 50 per cent of the total amount of direct radiation required to maintain the desired room temperature is provided. With this system the unit must have sufficient surplus heating capacity over and above that required for ventilation to take care of 50 per cent of the required amount of direct radiation.

The third system is the *blast system* which provides for the installation of the unit without direct radiation. This system can be used only when the unit is placed against the outside wall and where the total B.t.u. required for both heating and ventilating does not exceed that which the unit is capable of producing. It is favored because it is economical to install, economical to operate, and the custodian must ventilate in order to heat the building.

It is commonly known that more harm comes from overheating than from any other cause, and the tendency to overload a building with direct radiation sometimes results in complaints from overheating, even where automatic systems of temperature control are used.

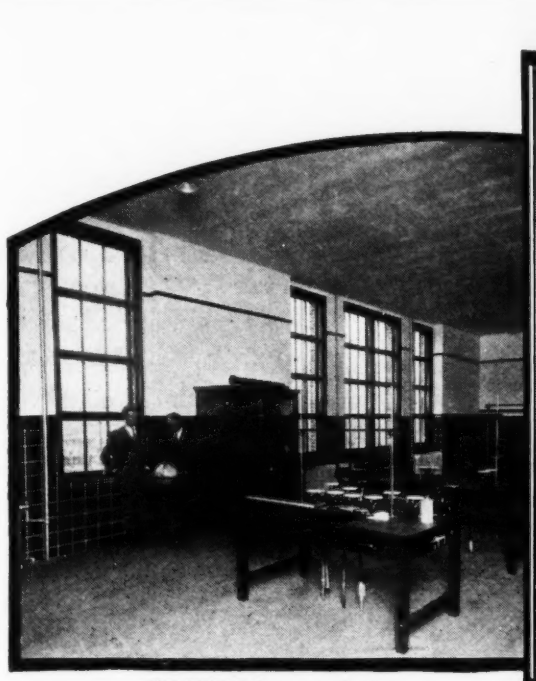
I firmly advocate the use of the blast system where a constant supply of electric current can be depended upon, and where the total B.t.u. required for both heating and ventilating is not in excess of the capacity of the ventilating unit.

No special treatment of vent flues is required for the unit ventilation system, the vitiated air being taken from the building in much the same manner as in other mechanical ventilating systems. The location of vent outlets should be at or near the floor line. Small vent flues create better diffusion particularly where the cross-sectional area of the vertical vent flue does not exceed 20 sq. in. per hundred cu. ft. of air. Thus, where 1,200 cu. ft. of air per minute is discharged into a single vent flue, it is recommended that the flue have a cross-sectional area of 240 sq. in. This is equal to a velocity of 750 ft.

(Concluded on Page 164)



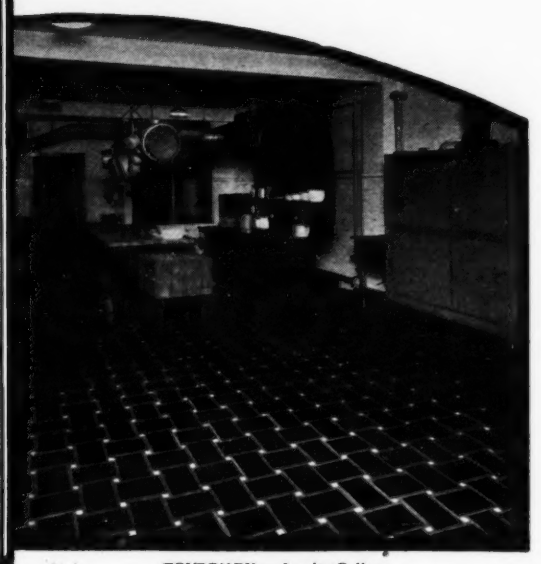
A TYPICAL MOTOR FOR A UNIT VENTILATOR.



PHYSICS Laboratory — Jesuits College — New Orleans, La.



SECTION of Main Toilets — Jesuits College — New Orleans, La.



KITCHEN — Jesuits College New Orleans, La.

Wogan & Bernard, Architects
Zimmermann's Bldg. Specialties Co., Tile Contractors
Romany Quarry Tiles on floors and wainscots

A Permanent Asset of Beauty

NO matter where you install Romany Quarry Tiles, their original attractiveness becomes a permanent asset of the building. Place them in floors and wainscots, wherever the wear is the hardest; and they will retain their fresh, cleanly appearance long after the balance of the building has become worn and scarred.

Absolutely boy-proof, unsurpassed for durability, beautiful, cleanly and inexpensive; Romany Quarry Tiles are the logical selection for floors and wainscots in all types of schools and colleges.

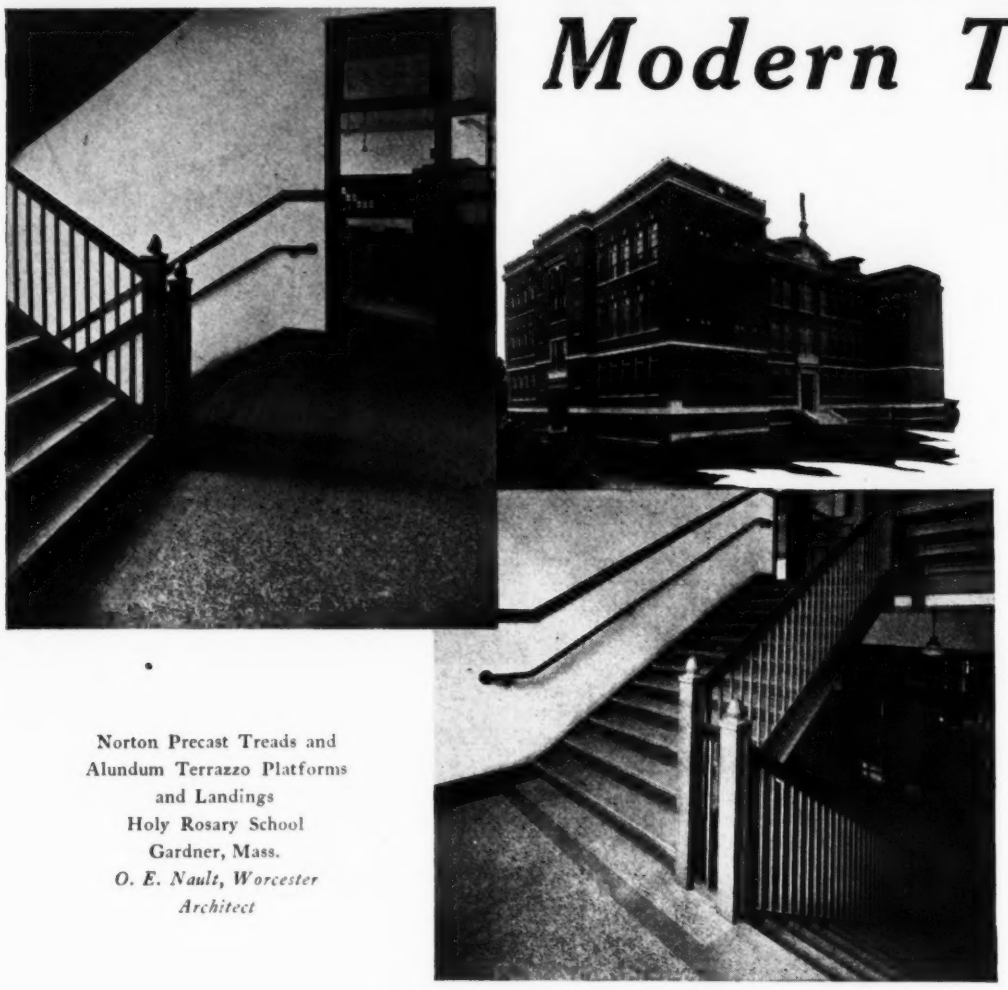
Romany Quarry Tiles are an American product. They are made in Romany Reds, Romany Greys, Romany Browns and the beautiful Romany Rainbow Tiles—a medley of golden shades that range from dark russets through the tans to pale greens.



UNITED STATES QUARRY TILE COMPANY
PARKERSBURG, WEST VIRGINIA
Member, Associated Tile Manufacturers



ROMANY QUARRY TILES



Norton Precast Treads and
Alundum Terrazzo Platforms
and Landings
Holy Rosary School
Gardner, Mass.
O. E. Nault, Worcester
Architect

Modern Treads in the MODERN SCHOOL

Precast to the desired size and shape in an unlimited number of attractive color effects, Alundum Aggregate Treads are meeting the demand for a modern tread for modern buildings.

Aggregates of bonded Alundum abrasive, the hard and tough electric furnace product, impart a durability that will withstand the hardest school traffic and a surface texture that is permanently "non-slip."

NORTON COMPANY, WORCESTER, MASS.
New York Chicago Detroit Philadelphia Pittsburgh
Hamilton, Ont.

NORTON FLOORS
Alundum Tiles, Treads & Aggregates

SCHOOL LAW

Schools and School Districts

The determination of what studies are immoral or dangerous is primarily for the board of education and ultimately for the courts (Colorado Laws, § 8333).—People v. Stanley, 255 Pacific Reporter, 610, Colo.

Whether the Bible was a sectarian doctrine, the teaching of which was denied in the schools, is held for the courts' determination (Constitution art. 9, § 8).—People v. Stanley, 255 Pacific Reporter, 610, Colo.

School-District Government

The allowance of the traveling expenses of the county superintendent as ex-officio secretary of the board of education is held unauthorized (Acts of 1925, c. 115; Shannon's code, § 1410; Acts of 1907, c. 236, § 3).—Whitthorne v. Turner, 293 Southwestern Reporter, 147, Tenn.

The power to remove school directors is discretionary with the court of common pleas, and is reviewable only if improperly exercised (School code of 1911, § 217 [Pennsylvania statutes of 1920, § 4699]).—In re Summit Hill School Directors' Removal, 137 Atlantic Reporter, 143, 289 Pa. 82.

A proceeding for the removal of school directors may be had either against the entire board or individual members (School Code of 1911, § 217 [Pennsylvania statutes of 1920, § 4699]).—In re Summit Hill School Directors' Removal, 137 Atlantic Reporter, 143, 289 Pa. 82.

School-district directors are held not personally liable on their notes for money borrowed without authorization by the electors (Crawford and Moses' Digest, §§ 8837, 8840).—Rural Special School District No. 50 v. First National Bank, 292 Southwestern Reporter, 1012, Ark.

School-District Property

The Buffalo school board has sole power to select school sites subject to the city council's acceptance or rejection thereof (Education law, §§ 875, 876, as added by the laws of 1917, c. 786, § 1, and amended).—Kane-Cadillac Co. v. City of Buffalo, 221 New York Supreme Court, 167.

The acceptance by the Buffalo city council of a school site selected by the board of education became effective by a vote of three of five councilmen.—Kane-Cadillac Co. v. City of Buffalo, 221 New York Supreme Court, 167.

The school district is held to be a "municipal division" or "subdivision" and is within the statute in requiring a contractor to accept the Workmen's Compensation Act (Pennsylvania statutes of 1920, §§ 21986-21988).—Lehigh Coal & Navigation Co. v. Summit Hill School Dist., 137 Atlantic Reporter, 140, 289 Pennsylvania 75.

Changes in a school-building contract subsequent to the award to the bidder and his failure to comply with the statute is held to render the contract void (Pennsylvania statutes of 1920, §§ 21986-21988).—Lehigh Coal & Navigation Co. v. Summit Hill School Dist., 137 Atlantic Reporter, 140, 289 Pennsylvania 75.

After the award of a contract, if a change or alteration is found necessary, readvertisement with notice thereof should be had.—Lehigh Coal & Navigation Co. v. Summit Hill School Dist., 137 Atlantic Reporter 140, 289 Pennsylvania 75.

School-District Taxation

The holders of a school board's notes for money borrowed without authorization by the district electors have acquired no rights (Crawford & Moses' Digest, §§ 8837, 8840).—Rural Special School Dist. No. 50 v. First National Bank, 292 Southwestern Reporter, 1012, Ark.

Notes executed by rural special-school-district directors for money borrowed without authorization by the electors, are held to be void (Crawford & Moses' Digest, §§ 8837, 8840).—Rural Special School Dist. No. 50 v. First National Bank, 292 Southwestern Reporter, 1012, Ark.

A school district is not liable on the directors' notes for money borrowed without authorization by the electors, because it used the school building since its erection therewith (Crawford & Moses' Digest, §§ 8837, 8840).—Rural Special School Dist. No. 50 v. First National Bank, 292 Southwestern Reporter, 1012, Ark.

The holders of a school board's notes for money borrowed without the electors' authority have no lien on the schoolhouse constructed therewith (Crawford & Moses' Digest, §§ 8837, 8840).—Rural Special School Dist. No. 50 v. First National Bank, 292 Southwestern Reporter, 1012, Ark.

The union-high-school district may issue bonds to build a stadium (Civil code of 1913, § 2736, as amended by the laws of 1925, c. 24).—Alexander v. Phillips, 254 Pacific Reporter, 1056, Ariz.

A "stadium" used for athletic games and providing for spectators is a schoolhouse within the statute (Civil code of 1913, 2736, as amended by the laws of 1925, c. 24).—Alexander v. Phillips, 254, p. 1056, Ariz.

Pupils

Reading of the Bible in public schools is held not to create a religious test of admission to a public educational institution (Constitution art. 9, § 8).—People v. Stanley, 255 p. 610, Colo.

"Educational institutions of the state" do not include the public schools (Constitution art. 9, § 8).

The school district is held liable for tuition to a high school in an adjoining district for a child living with a maternal aunt within the district (School code, § 1402).—Confluence Borough School Dist. v. Ursina Borough School Dist., 88 Pennsylvania Superior Court 299, Pa. Super. Ct.

The parents' right to have children taught what they desire is subject to qualification that things taught must not be immoral or dangerous to the public welfare (Constitution of the United States, Amendment 14, § 1).—People v. Stanley, 255 Pacific Reporter, 610, Colo.

A state may forbid immoral and dangerous teachings, though taught as a moral and religious duty.—People v. Stanley, 255 Pacific Reporter 610, Colo.

The determination of what studies are immoral or dangerous is primarily for the board of education (Colorado Laws, § 8333).—People v. Stanley, 255 Pacific Reporter, 610, Colo.

A school board cannot require the limitation of a parent's right to direct his children's studies as a condition to the enjoyment of the right to have the children educated in the public schools (Constitution of Colorado, art. 9, § 2; Constitution of the United States, Amendment 14, § 1; Colorado Laws, § 8333).—People v. Stanley, 255 Pacific Reporter, 610, Colo.

(Continued on Page 79)



FORD SCHOOL, HIGHLAND PARK, DETROIT, MICHIGAN CONTRACTOR: F. G. GODDARD, INC., DETROIT, MICHIGAN

The fact that so many modern school buildings are equipped with steel windows today simply means that in school buildings such as the one shown above, a better type of window has been found and used. ' ' ' Fenestra men, recognizing that the designing and detailing of steel windows is a specialized task, have established an Architectural Service Department which is available to any architect without charge or obligation. At your request this department will furnish you with sketches, perspectives, elevations, details, cross sections, or any other information pertaining to steel windows which you may desire. ' ' ' ' Furthermore, you can easily arrange for a complete demonstration of Fenestra Windows at any convenient time. Fenestra organizations, each rendering complete service, will be found in every section of the country.

DETROIT STEEL PRODUCTS COMPANY, C-2266 EAST GRAND BOULEVARD, DETROIT, MICHIGAN
CANADIAN METAL WINDOW AND STEEL PRODUCTS CO., LTD., TORONTO, ONT., CAN. FACTORIES: DETROIT, MICH., OAKLAND, CALIF., AND TORONTO, ONT., CAN.

ARCHITECTURAL *Fenestra*

for
Cleanliness
Durability
Economy
Comfort
Efficiency



and for health

Floor *with* Maple

Few people assume a greater responsibility than those who build schools. The health and welfare of children and teachers—the economical use of public money—these are two ever-present problems that call for careful thought and sound judgment.

Because Maple, in the flooring field, solves both these problems so adequately it is outstandingly the choice for modern schools. Maple is warm, dry, resilient—reduces fatigue, "colds," absences. It is remarkably easy to keep clean, due to its tight-grained, tough-fibred texture and permanently smooth surface.

Maple will not sliver or splinter. It offers no open lodging places for dirt and germs. It will not develop ridges. Shuffling feet only make it smoother with time. Its amazing endurance makes it easily the most economical flooring for schoolroom use. Maple, moreover, provides an exceptionally fine anchorage for desks.

And Maple floors bring into the schoolroom the inviting, friendly atmosphere of the forest—the sort of inspiration to youthful minds that only natural surroundings can impart.

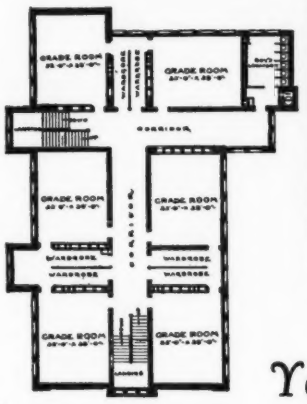
In classrooms, assembly halls, hallways, gymnasiums—in every section of the building where human health and lasting economy are combined factors, floor with Maple.

New!
Maple Floors in Color
By a scientific process recently developed, hard Maple Flooring is now made to take a variety of beautiful, lasting color finishes—opening up entirely new possibilities for attractive decorative effects. Standard finishes as follows:
EARLY AMERICAN, SPANISH BROWN, AUTUMN BROWN, SILVER GRAY, DOVE GRAY, ROYAL BLUE, PASTEL GREEN, ORCHID, SEAL BLACK, NATURAL
Write for *free* booklet, "The new color enchantment in Hard Maple Floors."

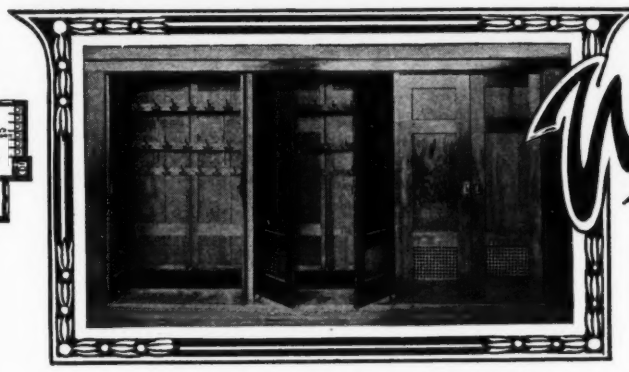
Guaranteed Floorings
The letters **MFMA** on Maple, Beech or Birch flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing and grading rules which economically conserve these remarkable woods. This trade-mark is for your protection. Look for it on the flooring you use. **MFMA**

Let our Service and Research Department assist you with your flooring problems. Write us.

MAPLE FLOORING MANUFACTURERS ASSN
1780 McCormick Building
Chicago

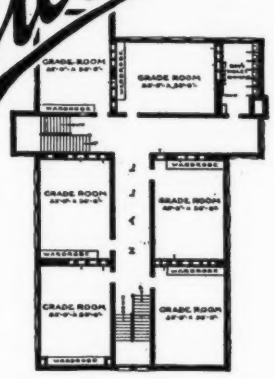


Typical floor plan of school with built-in, out of sight wardrobes.



Wilson Hygienic Wardrobe with disappearing doors built into alcove. Note grilles to allow for ventilation.

Wilson



Same plan laid out for Wilson Hygienic Wardrobes. Same coat and hat capacity, added class morale, with each class room about 55 square feet larger.

You can increase the size of your school without increasing its cost

WILSON Hygienic Wardrobes have done it for many schools and can do the same for you. The plan on this page tells how.

Besides their economy of space, Wilson Wardrobes can be heated and ventilated the same as a built-in coat room, and have the added advantage of being constantly under the teacher's eye.

May we send you Catalog No. 14 showing some interesting installations and the different styles in which they come.

Also Manufacturers of Sectionfold and Rolling Partitions.

OVER FIFTY YEARS IN BUSINESS

The J. G. WILSON Corporation
11 EAST 38TH STREET, NEW YORK CITY
OFFICES IN ALL PRINCIPAL CITIES

Established 1876
Wilson
DOORS - PARTITIONS - BLINDS
WARDROBES
THE J.G.WILSON CORPORATION
NEW YORK CITY

(Continued from Page 76)

The power of a school board to control instruction should be given a reasonable interpretation (Constitution, art. 9, p. 15).—People v. Stanley, 255 Pacific Reporter, 610, Colo.

Children in the public schools could not be required to attend the reading of King James Bible against their parents' will (Constitution of the United States, Amendment 14, § 1).—People v. Stanley, 255 Pacific Reporter, 610, Colo.

Sectarian doctrines, forbidden in the public schools, are held to apply to doctrines peculiar to various sects of Christianity and other religious sects (Constitution, art. 9, § 8).—People v. Stanley, 255 Pacific Reporter, 610, Colo.

LAW AND LEGISLATION

—The new school-consolidation law passed by the 1925 Missouri legislature has produced a large increase in the number of consolidated schools. Under the law, consolidated school districts which maintain at least two years of approved high-school work and have a tax levy of 100 cents on each one hundred dollars, receive special aid from the state school fund. Dunklin county now has six districts organized under the law which maintain four-year approved high schools.

—Six former school directors of Hanover township, near Wilkes-Barre, Pa., together with an architect and a contractor, were convicted by the court for having entered into a conspiracy in connection with the construction of a schoolhouse. They were sentenced to pay a fine of $500 each and the costs of the prosecution, and to be imprisoned in the Luzerne county jail for terms of one to two years each. An appeal to the superior court has been filed.

The state school department of Wisconsin recently rendered opinions to the effect that the electors of a school district interested in its financial affairs are privileged at any reasonable time to have access to the books of the school-district treasurer, if, in their opinion, the funds of the district have been illegally depleted. The books and records of a clerk and treasurer are public records and if demand is made by one or more taxpayers that they may have the privilege of inspecting these records, it is the duty of the treasurer and clerk to grant the request. Of course, the inspection must be made in the presence of the officers of the district and at the place where the records are kept.

—Commissioner of Education John H. Logan of the New Jersey Education Department has rendered an opinion in which he holds that highway danger does not constitute a necessity for transportation and that the various factors which may legally be considered in determining remoteness do not make necessary transportation for any children, except one, for whom the board is directed to provide transportation. The case was brought to the commissioner by the appellants against the board of education of the township of Roxbury, Morris county, because of the refusal of the board to furnish transportation for the children from the vicinity of their homes to the Roxbury school. While there might be danger to children because of the traffic on highways, the testimony in the case did not disclose automobile traffic which would delay children in going to and from school.

—Attorney General Edward L. Katzenbach of New Jersey in a recent opinion to the commissioner of education, has ruled that any child who has been excluded from school because of failure to comply with the vaccination provision of the state law, must receive instruction elsewhere in the subjects specified in the act of 1919. Any child who fails to attend school may be declared a juvenile disorderly person or a juvenile delinquent under the law, and the parent may be adjudged a disorderly person, and be punished accordingly, in accordance with the provisions of the law.

It appears that in a certain school district of the state, certain pupils had been excluded from school three years ago for failure to comply with the vaccination requirements, since which time they had been without instruction. The commissioner asked for an opinion as to whether these children were exceptions to and outside the provisions of the compulsory school law, so that the latter might not be enforced against them.

The 1927 session of the Virginia legislature considered a number of changes in the school laws which are to be submitted to the people before they become effective. Among the changes are the appointment of a state board of education by the governor. The board is to consist of seven members to be appointed for four-year terms; the appointment of division superintendents by local city and county school boards from a list of eligible persons; the equivalent of the present state school funds will continue to be apportioned to the counties and cities on the basis of school population, but such other funds as the general assembly may appropriate are to be apportioned according to law. The changes will make available a fund to be used to equalize educational opportunity or it may be distributed on the basis of average daily attendance in school.

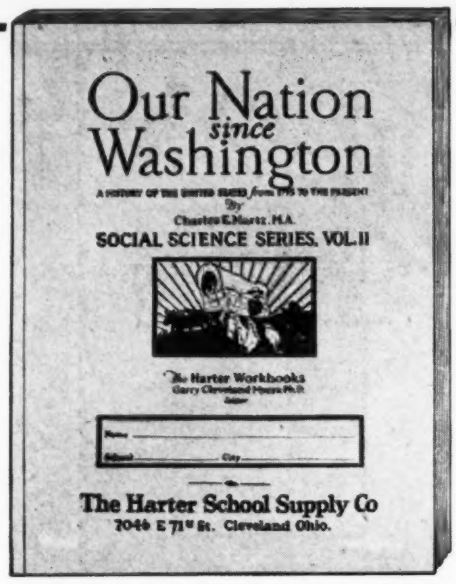
—A recent opinion of the attorney-general of Illinois holds that the employment of nurses by school boards is illegal. A bill has been introduced in the Illinois legislature which seeks to legalize the employment of nurses whose duty it will be merely to locate disease and notify the parents, leaving all medical treatment within their option. President L. J. Thiele of the Illinois State School-Board Association supports the bill.

—The Wisconsin Department of Public Instruction has ruled that in the matter of discipline the driver of a school bus occupies the position of a teacher for the time being. It is the duty of the children to obey the orders of the driver while in the vehicle and it is his duty to see that no child placed in his care is imposed upon in any way by other children. Under all usual and ordinary conditions, he must recognize the right of every child to comfort and good usage and freedom from annoyances of other children while under his care. It is also the duty of the driver to report cases of misconduct to the principal and to the parent or guardian.

—Chapter 126 of the Wisconsin laws has been amended giving school electors assembled at any annual meeting power to authorize or direct the sale of any property belonging to the school district. Where a school site is leased or rented and it is desired to have a new school site, the leased or rented lands must revert to the owner of the adjoining land from which the school site was formerly a part.

—Chapter 128 of the Wisconsin laws has been amended giving a county of not more than 12,000 population power to establish a county free high school. Under certain conditions, parts of the county may be exempted from taxation for the purpose of building and maintaining a county free high school.

—Chapter 129 gives the tax commission of the state of Wisconsin power to inquire into the system



HARTER'S WORK BOOKS

American History Series

FOR JUNIOR AND SENIOR HIGH SCHOOLS

By CHARLES E. MARTZ, M.A.

THE MAKING OF THE AMERICAN NATION—VOLUME I
OUR NATION SINCE WASHINGTON—VOLUME II

The student needs more than a test. He needs guidance — self-directed study.

The Harter History Work Books give such guidance. They help make the assignments of the student definite and they show him exactly how to go about it. They help carry him back through imagination into the times he is studying. They help make the study period a thinking period in which the students do not merely prepare to reproduce the assigned matter, but in which they manufacture original thoughts, based upon this material.

Each of these Work Books proceeds upon the assumption that we are teaching "Social Science," the study of society. The student is led to think about problems of economics, government, international affairs, and the other aspects of group life. The matter is organized historically.

Each chapter begins with a short discussion which introduces the problem. Assignments by pages in the more popular textbooks are given. Then a series of questions and definite tasks are presented, with space provided for answers or for the doing of the task. The needed fact material is stressed, and by skillful questions, the pupil is led to think through some of the less obvious aspects of the problem, where such a consideration is of value. Some needed maps are given, but emphasis is laid upon the ability of the pupil to draw quick sketch maps at every stage of the work, for which help is given.

When the pupil has finished these two volumes he has completed a good course in United States History. He has also considered many of the problems that are ordinarily the province of Civil Government, or of Community Civics. It is the newer history for citizenship.

Work Book, Volume I—The Making of the American Nation (From 1600 to 1795), 144 pp.....$0.68
Work Book, Volume II — Our Nation Since Washington (1795 to the present), 144 pp.....$0.68

Regular School Board Discount

SAMPLE COPIES SENT ON APPROVAL TO SUPERINTENDENTS
Send for our catalog listing all Harter Publications

THE HARTER SCHOOL SUPPLY COMPANY
EDUCATIONAL PUBLISHERS
2043 EAST 71ST STREET CLEVELAND, OHIO

TEACHERS' HANDBOOK IN AMERICAN HISTORY

By Charles E. Martz, M.A.

To accompany these **Pupils' Work Books** and to aid teachers who have not access to much outside material for her own preparation, a **Teachers' Handbook in American History** has been prepared. This begins with a short discussion of the general technique of teaching. Then each lesson is taken up and definite help given in its preparation.



Teachers' Handbook in American History, 128 pages, per copy $0.60

of accounting of public funds now in use in towns, villages, cities, and counties. This power gives an opportunity for securing an audit of the school-books, records, treasurer's accounts, etc., through the law.

—Chapter 234, creating subsection 3A of section 40.67 is intended to legalize certain acts of boards of education and school districts that for want of a statute, raised the question of legality. The section empowers boards of education to grant the use of school buildings or grounds for public meetings to which an admission fee is charged. The conditions of such use must be made clear and the sum which the organization is to pay for such use must be definitely determined and made a part of the contract. The law provides that the revenue obtained from the use of the buildings is to become a part of the school funds of the district.

—Chapter 256 of the Wisconsin laws relates to the election of boards of education in cities of the second class. It provides that wherever any city of the second class shall adopt the elective system of selecting members of the board, a special election for such membership must be held within thirty days after the referendum election has decided in favor of a change in the government of the schools.

—The Wisconsin Department of Public Instruction has ruled that where officers are elected to membership in union free-high-school districts, the highest vote counted as cast for some candidate elects. In the ordinary common-school district a majority of all the votes cast is required by law to elect. In case of tie votes in the usual district meetings, the chairman should call another ballot. In a union free-high-school district the two having the equal number of votes are to break the tie by casting lots.

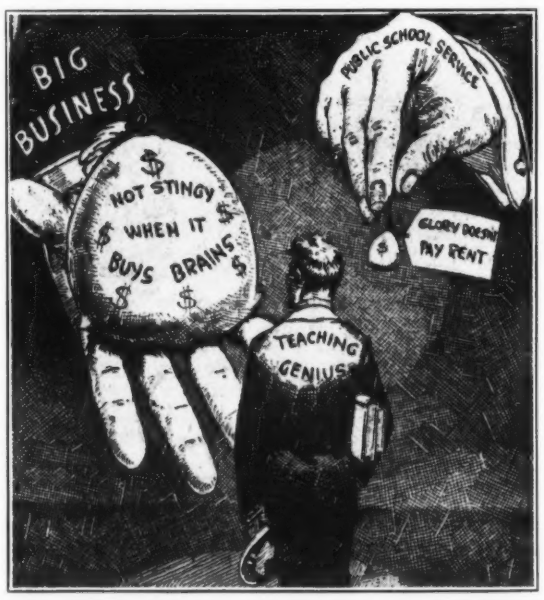
The department has also ruled that the newly revised school law requires that hereafter all contracts between teachers and school boards shall be in writing. Oral contracts entered into since July, 1927, should be reduced to writing at once. School boards and teachers should proceed at once to secure legal contracts.

Another ruling is to the effect that a vote on a bond issue or a loan from the trust funds taken by acclamation is of no effect and usually demands that a special meeting is necessary to decide the question. Even though the clerk has served the notice of a special meeting as required by law, failure to properly post the notices in four public places renders the meeting of no effect and it cannot be counted as a meeting.

RECENT ACCOMPLISHMENTS IN THE MT. HOLLY SCHOOLS

Mr. E. F. Bunce, supervising principal of schools at Mt. Holly, New Jersey, has issued a very interesting report showing the accomplishments of the schools during the school year 1926-27. One of the outstanding accomplishments of the year was the completion and occupation of the Samuel Miller School, which houses three hundred pupils from the western part of the town and from an adjoining township.

Another event of the year was the organization of the Mt. Holly High-School Alumni Association. A similar organization formerly existed but the society had not been functioning for the last ten years.



RAISE BID TO KEEP TEACHING TALENT.
—Seattle Post-Intelligencer.

A third accomplishment was the organization and administration of a school lunchroom system. A lunchroom had been conducted two years by the parent-teacher association with marked success, but the financial end of the organization called for revision. This year the board of education assumed charge of the operation of the lunchroom, with a committee of teachers in immediate charge. A competent director was employed to conduct the lunchroom, assisted by a number of girl helpers and teachers who do the serving. Under the plan, the lunchroom has served wholesome lunches at a very moderate cost, has been able to pay the salary of the woman in charge, and to accumulate a small balance in the lunchroom account.

During the year the supervising principal has inaugurated a system of uniform groupings of pupils in the several grades as a means of stimulating intelligent individualized teaching. This has been done with the aid of standard achievement tests in grades four, five, six, and seven, together with the use of group intelligence tests. The tests revealed great variation in achievement ability in each subject and in each grade. The teachers have adapted their teaching to the needs of the pupils as revealed by the tests, and as a result, a number of pupils have been promoted to a higher grade. A few pupils were demoted, but in general, the weaknesses were revealed and the teachers were able to bring the retarded pupils up to the standard.

At present the administrative staff is struggling with individualized instruction in certain subjects in some grades. An adaptation of the Winnetka plan has been used with much success. The schools have been used by the Glassboro Normal School for practice purposes during the year. The public-school system has cooperated by training teachers for the New Jersey schools, and the local schools have thus been brought into touch with new people, new ideas, and new enthusiasm for teaching.

—George A. Allen, Jr., state superintendent of Kansas has appointed a committee whose duty it will be to formulate amendments to the school code on the election of county superintendents. The committee consists of O. J. Lane, Douglas County, Chairman; Hattie Heckenthorn of McPherson; George L. McClenny of Butler; Nell Pate of Johnson and Ray Hodgell of Jewell.

Announcing

CRAM'S SCHOOL MAPS

An All-American Line

For sixty years, the name of Cram has been identified with the publication of maps and atlases, and Cram products have been accepted and recognized as authoritative by historians and educators. Such a background adds special interest and significance to this announcement of Eight New Series of School Maps, manufactured in our own plant, and edited, engraved, and printed to Cram standards.

These maps are not produced from old, made-over, or corrected plates, but are printed from new relief line plates made by the wax-engraving process. While such plates cost considerably more than the lithograph plates commonly used, the results are far superior in clearness of print, fineness of detail, and beauty of color. All maps are right up-to-date, including all recent political and geographical developments. In their preparation, our editors have referred to practically all maps published in Europe and America to be sure that these new series embody all the most valuable features of map-making art. Clear, bold Gothic type makes maps easy to read at classroom distance.

We feel that American schools, teachers, and students should have the best that the map makers can produce. In these new series, we are manufacturing maps of this quality to sell at prices based on quantity production and distribution, which puts them within easy reach of any school.

Eight New Series

American-Made

CRAM'S SUPERIOR SERIES

CRAM'S MODERN SERIES

CRAM'S AMERICAN SERIES

CRAM'S INTERMEDIATE SERIES

CRAM'S EXCELLO SERIES

CRAM'S IDEAL SERIES

CRAM'S SUPERIOR COLORED OUTLINE SERIES

CRAM'S EXCELLO COLORED OUTLINE SERIES

Write for catalog and Prices.

We publish also a complete line of state maps, desk outline maps, atlases, and globes. Our school map catalog, No. 60, together with any special information desired, will be gladly and promptly forwarded on request.



THE GEORGE F. CRAM COMPANY

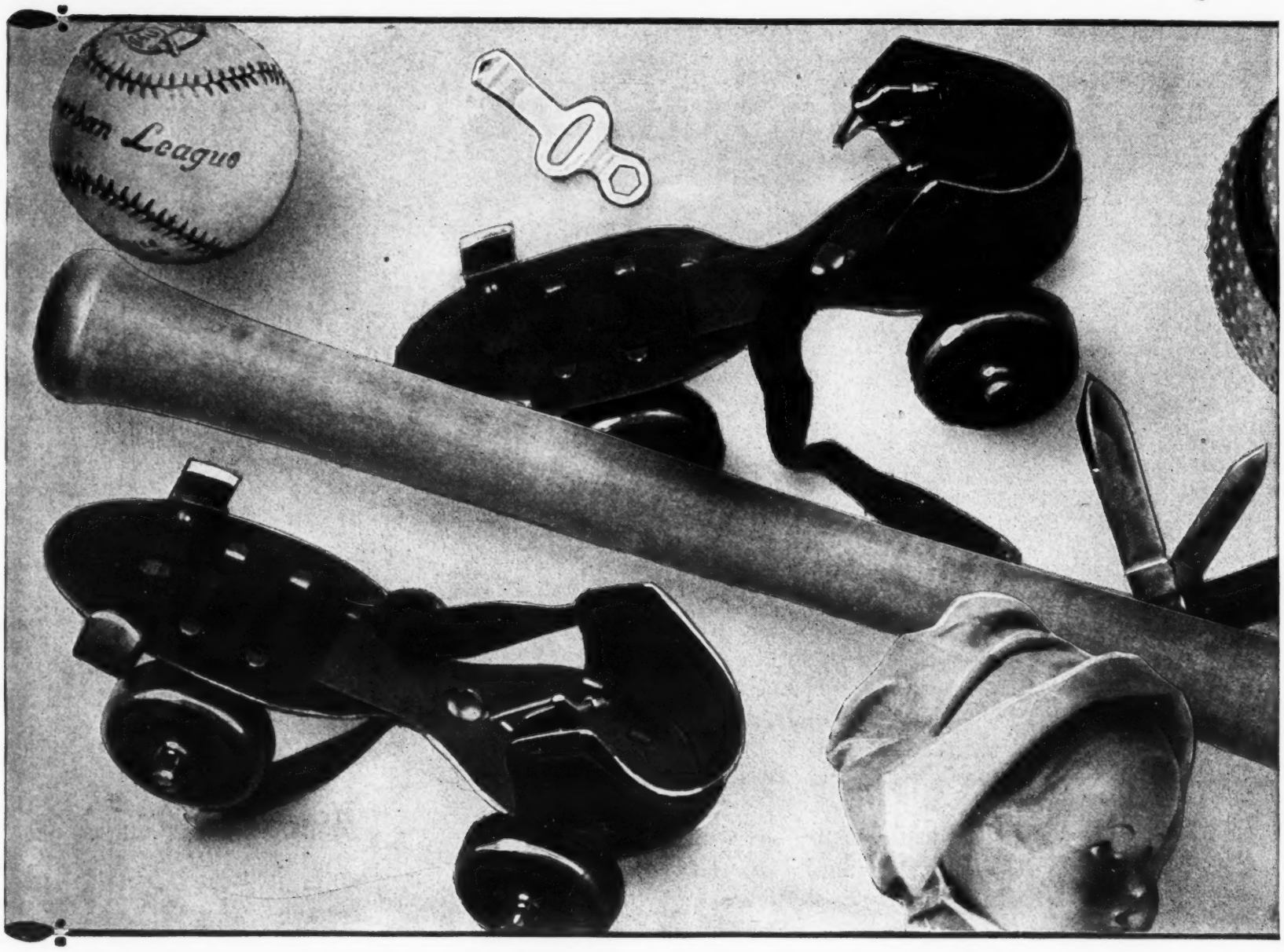
Map-Makers for Sixty Years

ESTABLISHED 1867

31 East Georgia St. Indianapolis, Indiana



What Do Little Boys



Jumping ropes, skates, balls,

CHILDREN—to whom a lost ball is a tragedy, a new doll the utmost joy—have few thoughts for such dull things as water closets.

Children don't realize that the water closet is the most important sanitation factor—or that an unflushed closet can cause terrific damage to health and efficiency.

The Clow Automatic removes—entirely—the unflushed closet menace. For, after every use, it flushes automatically. With

JAMES B. CLOW & SONS

CLOW

NEVER

Forty-Eight Styles, Heights and Types to Meet Your Requirements



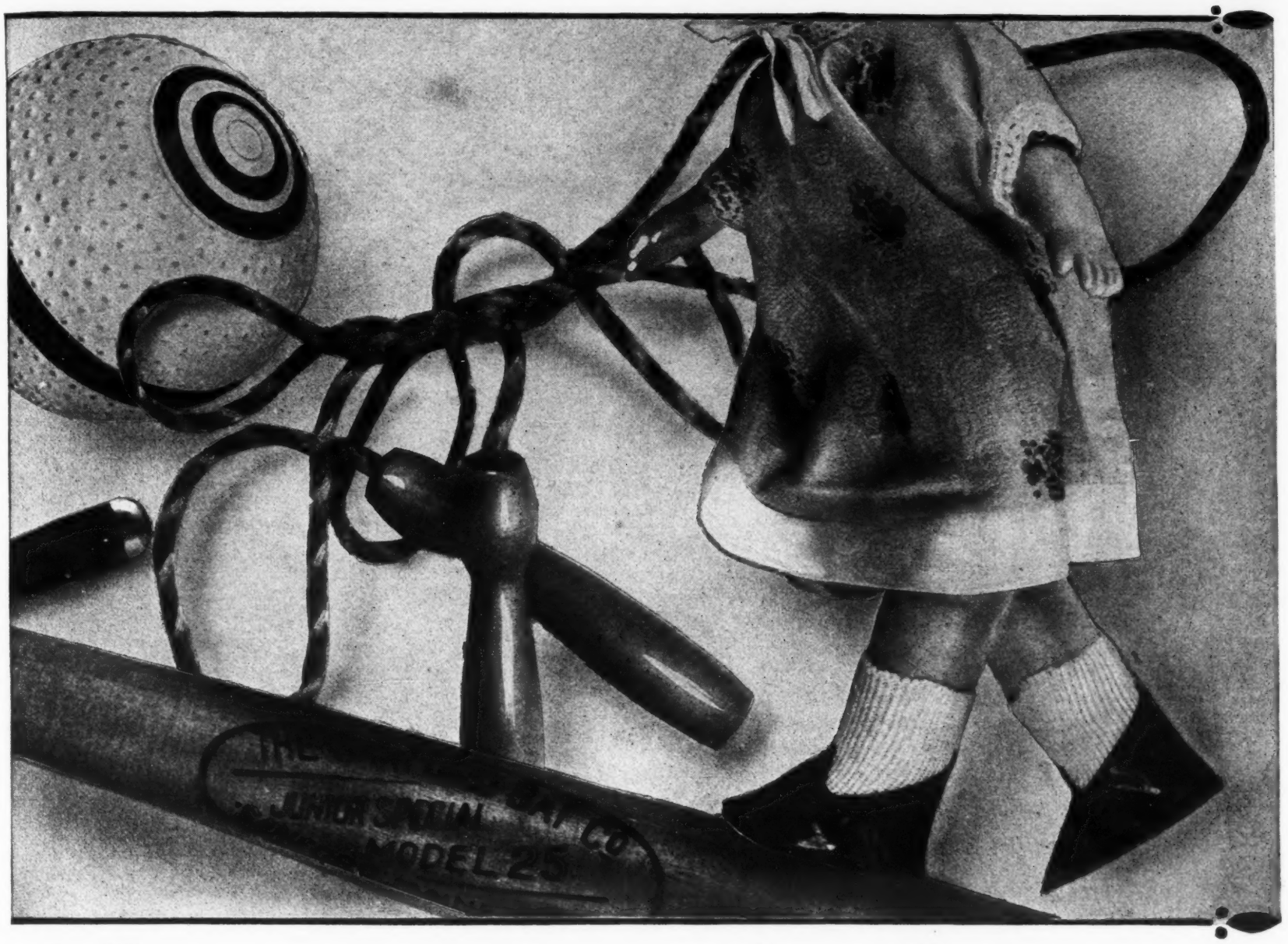
The Clow Automatic Closet. This practical wall-hung style allows cleaning of floor underneath. Closed top tank is concealed in utility corridor.

A Note to the Economical

Twenty to thirty-nine years of service, less than two cents per year repair costs over a 10-year period, three to seventeen gallons less per flush—these records are facts, established by Clow Automatics in actual operation.

More instructive and useful than many school books — is our new plumbing booklet. It tells how to bring surer hygiene to schools—and how to bring smaller water bills. It's a "personal talk" with sanitary engineers. Send for it today.

and Girls Think Of?



dolls, games–or water closets?

it, careless children cannot cause insanitary closet conditions.

And, though used many, many times a day, for many, many years *—the Clow Automatic never forgets.*

With but two moving parts, the Clow-Madden valve is simpler than any other closet valve. It has no intricate parts to wear out and break.

Our Clow Automatic booklet "talks" to you with the knowledge of an expert hygiene engineer. It tells how your school can be sure of a clean toilet room. Send for it today.

201-299 N. Talman Ave., Chicago

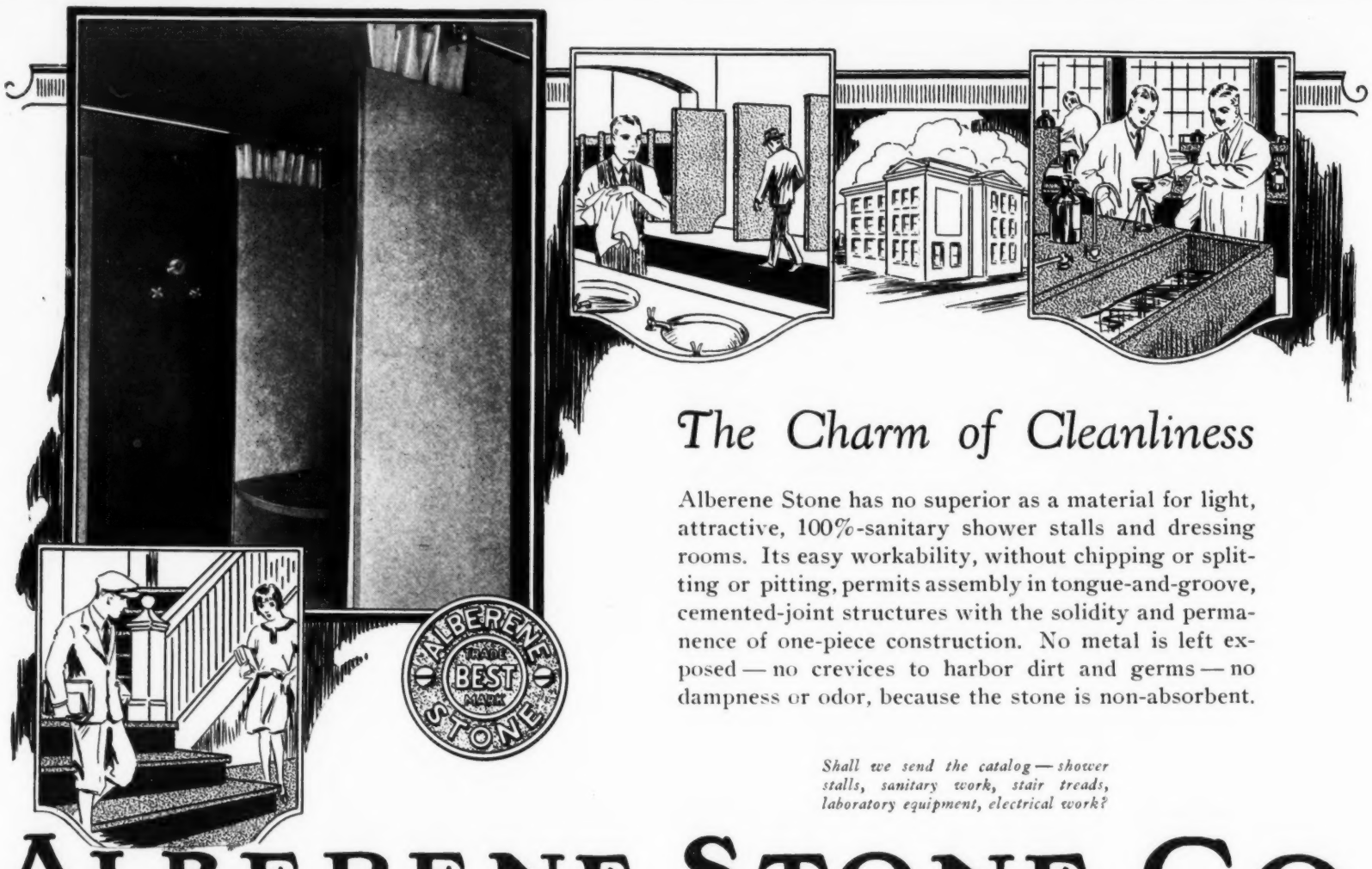


The Clow Automatic Closet. The bowl is heavy — about sixty pounds. The open front seat is strongly hinged and reinforced.

AUTOMATIC

FORGETS

Forty-Eight Styles, Heights and Types to Meet Your Requirements



The Charm of Cleanliness

Alberene Stone has no superior as a material for light, attractive, 100%-sanitary shower stalls and dressing rooms. Its easy workability, without chipping or splitting or pitting, permits assembly in tongue-and-groove, cemented-joint structures with the solidity and permanence of one-piece construction. No metal is left exposed — no crevices to harbor dirt and germs — no dampness or odor, because the stone is non-absorbent.

Shall we send the catalog — shower stalls, sanitary work, stair treads, laboratory equipment, electrical work?

ALBERENE STONE CO.

153 West 23d St. New York City.

Boston, Chicago, Philadelphia, Newark, N.J., Pittsburgh.

School Administration Notes

THE COUNTY UNIT OF SCHOOL GOVERNMENT

The development of the county-unit plan, as opposed to the district plan, is favored by the United States Bureau of Education. The bureau presents the subject in the following statement:

Because of the interest shown in many states in the county plan at the present time, and because the term commonly used, "county unit," is an indefinite one applied to administrative organizations which differ widely, a description of an effective county organization is here presented.

Practice in good systems already established indicates that a county organization to be most effective should make provision for a well-centralized business and professional administration, without depriving the people in each section of local initiative in school matters. The county board and the county superintendent should administer the general school affairs and expend the county school funds to equalize educational advantages among all the children of the county.

Division of Authority

Each school community should have a representative appointed by the county board, or, if desired, elected at an annual school meeting, to represent the school before the county board. Support should come principally from county funds. The school funds of the county should be expended by the county board of education for the general maintenance of all the schools.

The local school community should usually be given the right to levy taxes and issue bonds for extraordinary school purposes, such as acquiring additional land sites, or erecting new buildings. This gives a measure of local autonomy. This should be permitted only after a county-wide tax sufficient for all ordinary school purposes for the entire county has been levied and collected.

A good county system has an organization for the management and support of its schools similar to that of the best city system. The county board of education is elected from the county at large in the same manner as the best city boards are elected. It should have practically the same powers and duties. It determines the general educational policies of the county. It familiarizes itself with the educational needs of the entire county and locates schools where needed. It employs the county superintendent of schools and authorizes the employment of assistants.

Similar to City Schools

The county superintendent is its executive officer in exactly the same way that the city superintendent is the executive officer of the city board of education. In selecting a superintendent the board should have authority to employ the best person obtainable regardless of whether he is or is not a citizen of the county or even of the state. The board should be free, within reasonable limitations, to pay whatever salary may be necessary to obtain the most efficient person.

The county superintendency requires as much ability and professional experience as that of a city of the same population. It presents difficulties in size of territory, placement of teachers, organization of supervisory staff, school financing, location of buildings, and the like which are even greater than any city superintendents must meet. The salary should be commensurate with the responsibility.

The size of the board determines somewhat its effectiveness. The tendency is toward a board of five members, though very good results are evidenced in states with boards of three members, and others with boards of seven or nine. The members are elected from the county at large, or from electoral districts, sometimes but not always on a nonpartisan ticket.

The individuals on the board should be men and women of high standing and ability, interested in education, but not necessarily selected from those who have had actual school experience. They should serve without pay, except for the necessary expenses when attending board meetings. Their duties are strictly legislative, leaving all executive functions to the county superintendent.

Duties of County Board

Among progressive states with modern county-school systems the following are recognized as duties of the county board of education:

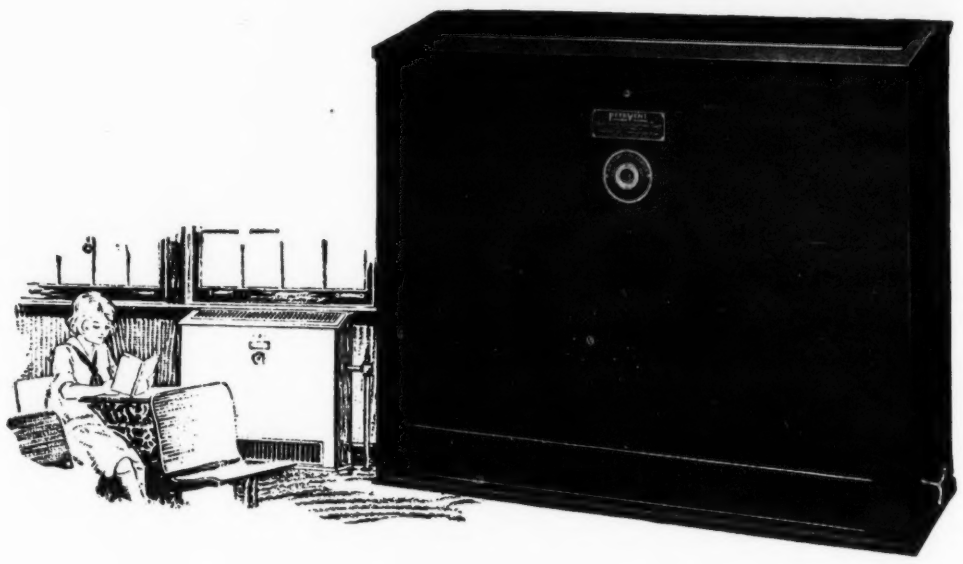
1. To enforce the laws relative to education and the rules and regulations of the state board of education within their respective counties.
2. To select the county superintendent and all necessary supervisors and office assistants; also to select one director for each school community within their jurisdiction, who shall be the custodian of local school property and represent local needs before the county boards.
3. To have direct charge of all county schools outside of incorporated city districts, including the closing of unnecessary schools, building new schools, consolidating schools, and conveying children to school, and organizing rural high schools.
4. To select all teachers needed in the county schools, on nomination of the county superintendent.
5. To levy a uniform school tax on all the taxable property of the county under legal limitations and to expend the funds thus procured to equalize educational advantages among all the school children of the county.
6. To exercise all other powers and duties not enumerated above but which are prescribed by law.

Subdistrict Trustees Provided

Subdistrict trustees.—In nearly all states organized with the county as the unit of administrative purposes, subdistrict trustees, one to three for each school or school district, are appointed by the board or elected by the people to have general charge of the school plant, to perform certain duties assigned either by law or by the county board of education, and to act in an advisory capacity to the county board concerning school conditions in their districts.

These subdistrict trustees act as local representatives of the people of the county, receive suggestions from the people, and make recommendations to the county board on the basis of these suggestions. In some states they are intrusted with important duties, such as keeping the school building in repair, having charge of the care and supply of school equipment, assisting in enforcement of the compulsory education law, and taking the school census.

(Continued on Page 86)



This is the standard PeerVent Heating and Ventilating Unit—36 inches high and 14 inches deep. The width varies according to capacity. Various other types are furnished to meet special architectural requirements.

Why PEERVENT? *Answered by Architects:*

THE following brief comments on PeerVent Heating and Ventilating Units are from letters written by architects. Names and complete letters on request.

1. Planning and installation less expensive. 2. Installation is easier. 3. Requires less cubic feet in the building. 4. Recirculates air in the room, or forces in fresh air, as may seem necessary. 5. Each room is under its own control and not influenced by any other part of the building. 6. Air from dirtiest streets delivered clean at any desired temperature. 7. Work done (in an office) increased enough to pay for the installation several times, the first year. 8. Does away with ducts on basement ceilings. 9. Eliminates vertical ducts from basement to class rooms. 10. Flexibility in planning, especially with reference to future changes. 11. Permits shutting off any room the moment the room is unoccupied, thus economizing on steam and electricity. 12. In small communities heating contractors can be found, capable of installing the work, who would be quite incapable of erecting a —— system. 13. Cost of operation reasonable. 14. Constructed on sound engineering principles. 15. Especially well built. 16. Noiseless in operation. 17. Service of the Company very good. 18. Most economical method of getting fresh air in the building in a positive manner. 19. At all times a little in advance with improvements. 20. Positive ventilation for each room. 21. Atmospheric or weather conditions do not affect this system. 22. Rooms on various exposures can be controlled to meet requirements. 23. Saving in flue construction, also in headroom and space in the basement. 24. Room left available for school purposes in the basement. 25. Ease of regulation of temperature. 26. The system is very flexible; any degree of ventilation can be obtained. 27. Eliminates expensive duct work, thus reducing power costs and temperature drops. 28. Can be controlled separately as regards weather and direction and force of winds.

Send for the PeerVent Catalogue and list of installations in your vicinity. If you wish to see our local representative, please so state.

PEERLESS UNIT VENTILATION CO., INC.

Skillman Avenue and Hulst Street (B), Long Island City, N. Y.

BOSTON 100 Boylston St.	PITTSBURGH 301 House Bldg.	BUFFALO 135 University Ave.	CHICAGO 808 Monadnock Bldg.	MINNEAPOLIS 240 7th Avenue South
SPRINGFIELD, MASS. 196 Worthington St.	HARRISBURG 705 Telegraph Bldg.	CLEVELAND 1836 Euclid Avenue	DETROIT 1214 Lafayette Bldg.	DES MOINES 520 Securities Bldg.
PORTLAND, ORE. 927 Board of Trade Bldg.		PHILADELPHIA Jefferson Bldg.	TORONTO, CANADA Darling Bros., Ltd., 77 York St.	

No knife can scar the fire-fused surface of

VITROLITE
"BETTER THAN MARBLE"

The tendency to write and scratch on walls and toilet partitions is thwarted by the use of everlasting Vitrolite. Its crystal-smooth, steel-hard surface will not show the marks of knife, pen or pencil.

Even time cannot change it. Vitrolite never discolors. Its surface never crazes. And being non-porous, it cannot absorb odors or any substance.

Scouring is never necessary. A sweep of damp cloth keeps Vitrolite immaculate and sanitary. Let us send you complete information and sample which you can subject to your own tests.



THE VITROLITE COMPANY

Suite 603, 133 W. Washington St., Chicago — *Factory:* Parkersburg, W. Va.

SALES REPRESENTATIVES

Atlanta	Cleveland	Miami	Portland	Colombia, S. A.	Mexico City
Baltimore	Dallas	Minneapolis	Providence	Copenhagen	Montreal
Boston	Denver	New Orleans	San Francisco	Havana	Osaka
Brooklyn	Detroit	New York	Seattle	Johannesburg	San Juan
Buffalo	Kansas City	Omaha	St. Louis	London	Shanghai
Cincinnati	Los Angeles	Philadelphia	Tampa	Melbourne	Vancouver, B. C.
		Pittsburgh	Washington		

(Continued from Page 84)

ADMINISTRATION NOTES

—During the past semester, the school authorities of Erie, Pa., adopted a new marking system having special reference to the high school. The new system is the result of a study by a special committee and has as its basis the ability of the pupil to successfully comprehend and profit by the subject or grades to which promotion is made. The system will be used in both the elementary and high schools and is arranged as follows:

A—93-100
B—85-92
C—78-84
D—70-77
E—Below 70
Passing grades A, B, C, D
Failure E
Passing mark 70

In the new system there is one failure grade to four passing grades, as against two failure grades and three passing, under the former plan. Under the old plan it was very difficult to check the records and pupils to find out if the conditions were being removed. It was also found that conditional promotions tend to laxness and failure to do good work. The new plan is expected to produce more satisfactory results since it is a test of the ability of the pupil to comprehend and profit by the work.

—In his first public utterance Webster H. Pearce, the state superintendent-elect of Michigan, said: "I am through trying to reform the world in which I live. I am going to look after the most dangerous citizen I know—myself."

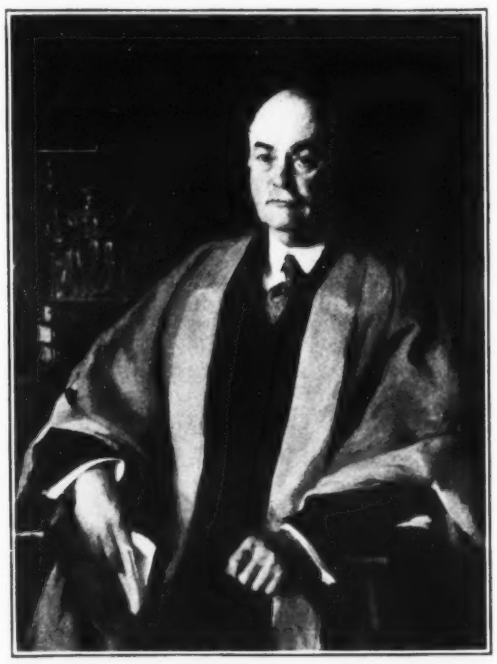
—A recent order of the President of Cuba forbids the admission of children under 14 years of age to motion-picture theaters after 8:30 P.M., except on Sundays and holidays. Fines imposed for violations are collected and used to purchase educational films for the public schools.

—A schoolhouse located in a residential district in Washington, D. C., was threatened by the influx of business concerns. The school authorities appealed to the zone commission and won their case.

—The annual report of summer-school work in Little Rock, Ark., shows a slight decrease in attendance, with a high ratio of advanced-work pupils and a high percentage of successfully completed courses. A total of 343 students of the senior high school completed their summer courses, out of a total registration of 348. Enrollment for the intermediate grades was 247, and for the primary grades 34 pupils.

—The county-unit system has been adopted for the schools of Pulaski county, Arkansas, by a vote of almost ten to one.

—The tendency to lengthen the school day, while it may be well for children with unfortunate home conditions, has its disadvantage in detracting from the health of the ordinary pupil, according to Dr. James F. Rogers of the school-hygiene division of the Bureau of Education at Washington, D. C. Dr. Rogers holds that because children thrive best with open air, sunlight, and activity, the part-time system in many schools may be a blessing rather than otherwise through the shortening of the school day. The problem of the school day, according to Dr. Rogers, resolves itself into one of making it subserve both the physical and mental needs of the child. The hours of school attendance matter but little if the school activities adequately fulfill this broad purpose. In many schools such a purpose is now gropingly aimed at.



PORTRAIT OF DR. NICHOLAS MURRAY BUTLER BY IVAN G. OLINSKY, RECENTLY PURCHASED BY THE COLUMBIA UNIVERSITY CLUB.
Photograph by courtesy of Macbeth Gallery.

—Jacksonville, Ill. Under a new system adopted at the high school, members of the senior class will be permitted to do their studying in the library. They will not be required to remain in the school building except for regular class periods.

—The Montana state board of education has adopted the recommendations of State Supt. May Trumper providing for a raise in the school standards.

—In addressing the local chamber of commerce, Supt. D. B. Clark of Kenton, Ohio, invited that body to visit the schools. Mr. Clark believed that a better school sentiment would be created by knowing what the schools were doing and costing.

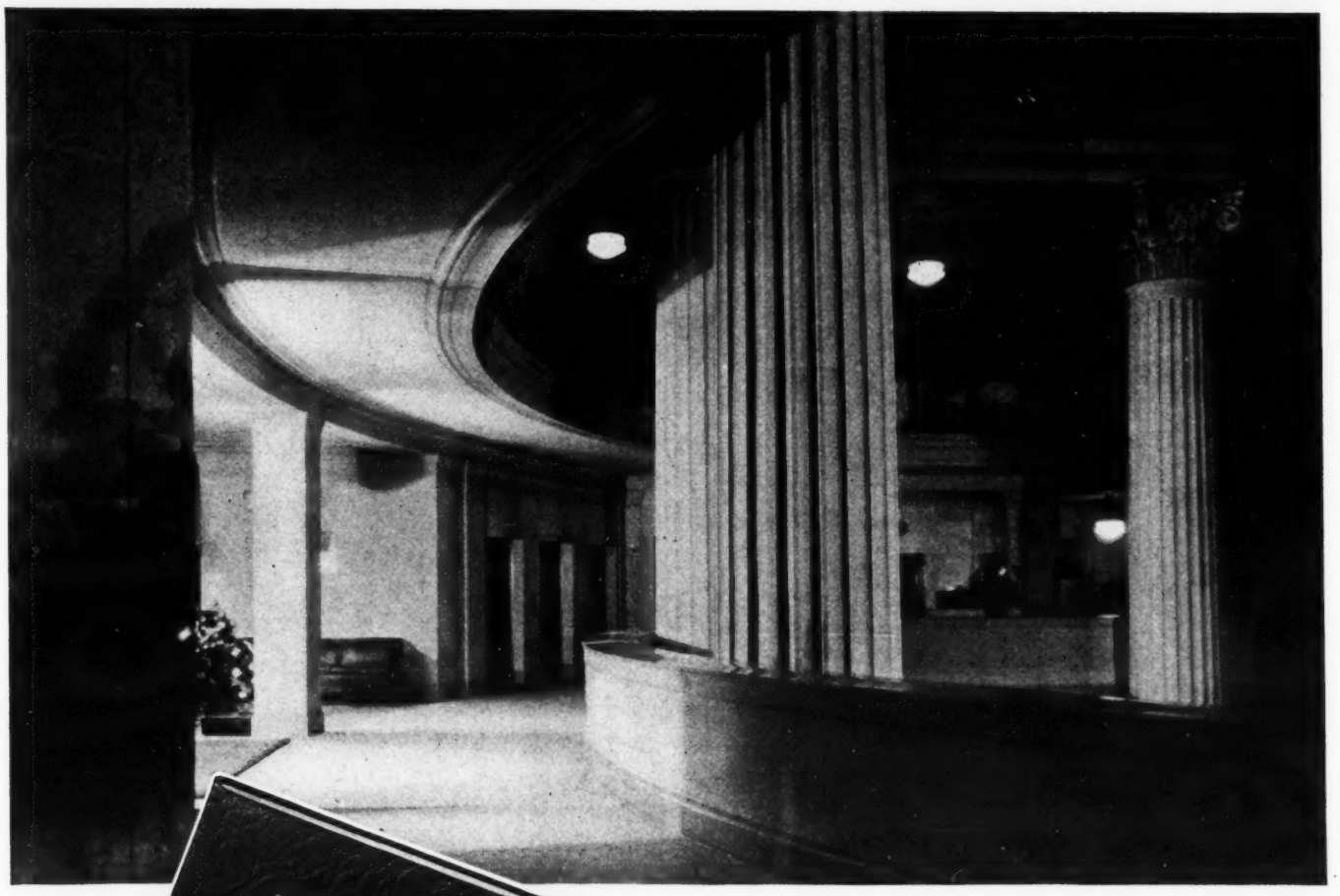
—Motion-picture equipment will become an important factor in the schools of Marion county, Ohio, according to a statement made by Supt. C. B. Rayburn recently. Visual education has come to stay is Mr. Rayburn's contention.

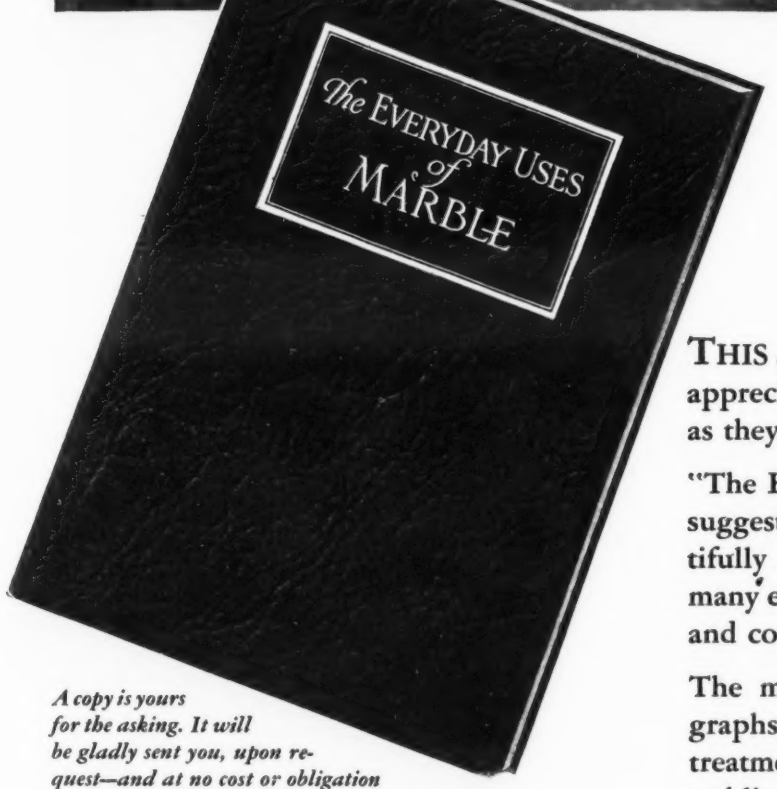
—Mrs. Josephine Corliss Preston, state superintendent of Washington, has sent word to school officials to the effect that there is a surplus of teachers in the state and that preference should be given to local rather than outside talent.

—Minneapolis, Minn. Supt. W. F. Webster has recently presented to the board a tentative salary schedule for junior high-school principals. The schedule provides for a minimum of $3,600, the same as the senior high-school principals.

—Miss Elizabeth E. Farrell, inspector of ungraded schools of New York City, reports that 262,177 pupils failed at promotion at some time in their school careers. She suggests that the problem can be met best by making larger use of the psycho-educational clinic of the department of education and by increasing the number of classes for the mentally defective children and making special provision for those in the regular classes who are slow-minded.

(Concluded on Page 89)





A copy is yours for the asking. It will be gladly sent you, upon request—and at no cost or obligation whatever. Write Department No. H-10

FOR FOLKS LIKE YOU

THIS *de luxe* booklet is for folks like you---folks who appreciate beauty, durability and economy combined, as they apply to modern buildings.

"The Everyday Uses of Marble" is just what its title suggests. It is a most interestingly written and beautifully illustrated printment of facts regarding the many everyday uses of marble, incident to both home and commercial adaptations.

The many illustrations---made from actual photographs---show numerous examples of present-day treatments in the home, the garden, business and public buildings.

NATIONAL ASSOCIATION OF MARBLE DEALERS

ROCKEFELLER BUILDING - CLEVELAND, OHIO

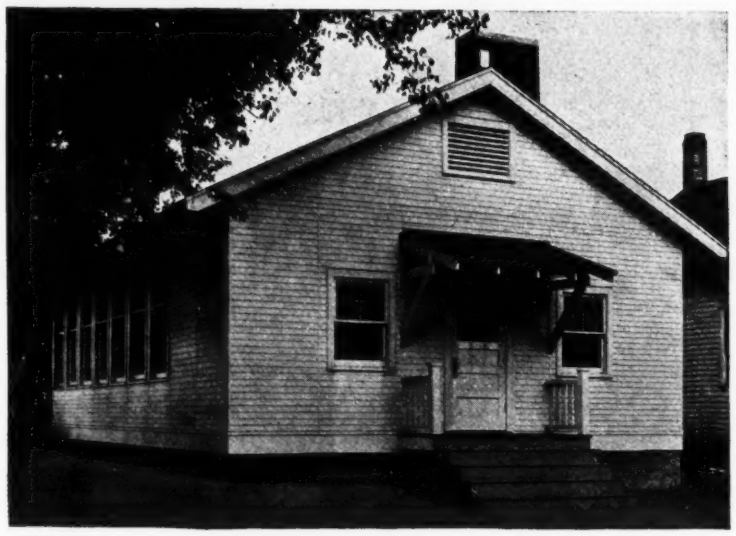
There is No Substitute for Marble

There's a Togan Schoolhouse for Every Need

Regardless of your school housing problems, there's a Togan Building to fill the need adequately as long as the need exists.

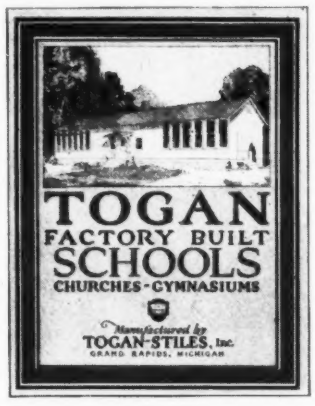
Togan schoolhouses are highly specialized products, developed and backed by an organization of broad experience and expert counsel. They provide attractive design, comfort, lighting, heating, and ventilation equal to that found in the most elaborate school structures at a fraction of the cost—a practical, sensible medium between the elaborate school and the cheap, temporary substitute.

Togan construction permits quick, easy erection and gives maximum strength and endurance with a minimum of time and labor. Built up at the factory and carried in stock, they can be shipped promptly upon order.



TOGAN ONE-ROOM SCHOOL

If desired, an experienced superintendent from the factory will relieve you entirely from all details in connection with the actual construction and turn over the building to you when you want it with everything completed ready for use. Whatever your problems, Togan offers an immediate and adequate solution.

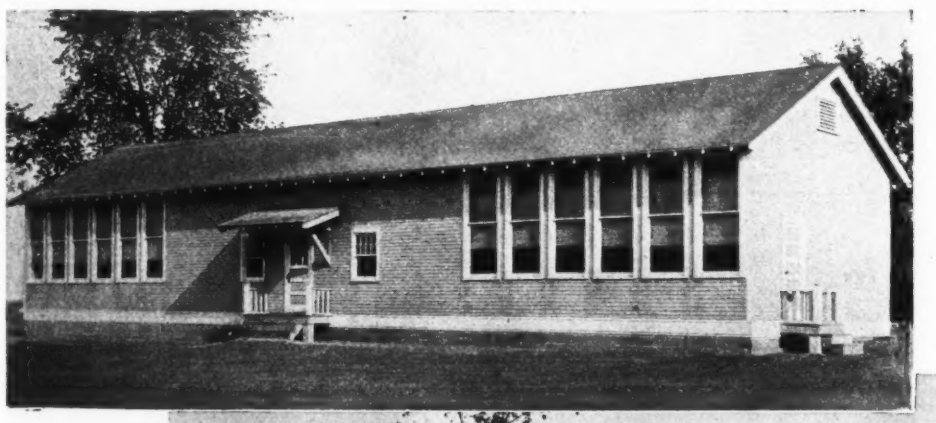


The uncertainties of the local carpenter-built method are entirely eliminated when you buy a Togan. They are designed and passed on by experts and conform to the strictest school building laws in every state. You know in advance how they will look, how they are constructed, and how much they will cost.

Standard designs consist of one, two, three, and four-room schools, planned in several alternate arrangements to cover varying requirements. Special designs where greater capacity is needed will be furnished upon request.

The new Togan School Catalog illustrates and describes a variety of designs to fit the requirements of both large and small communities—A book full of useful information of interest to school board and educational directors everywhere. Write for a copy today.

TOGAN TWO-ROOM SCHOOL



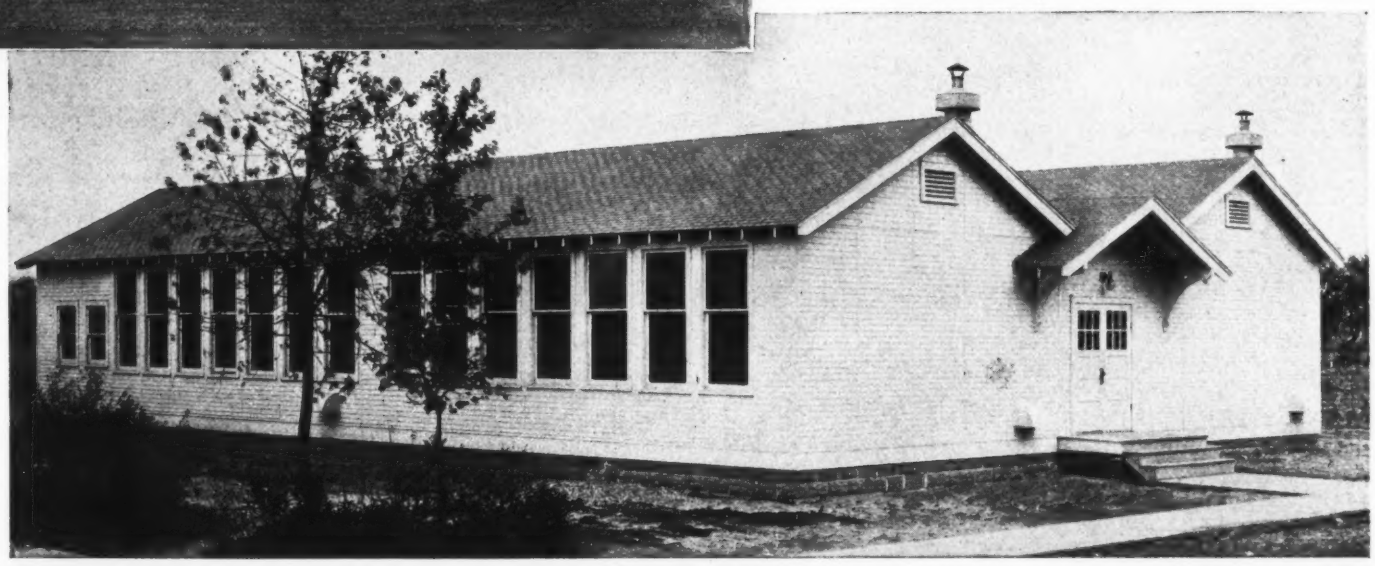
TOGAN-STILES, Inc.

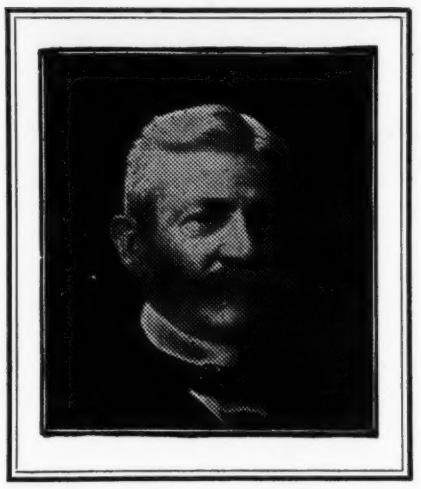
1606 EASTERN AVE., GRAND RAPIDS, MICH.

Eastern Office—TOGAN-STILES, INC.
Newtonville, Mass.

TOGAN BUILDINGS

Below—TOGAN MULTI-ROOM SCHOOL





The More
HOLDEN BOOK COVERS
You Use
the Longer Your Text Books
Will Last and
The CLEANER they will be.

Built to Save Money

Order NOW for all New Books

SAMPLES FREE

HOLDEN PATENT BOOK COVER COMPANY

Miles C. Holden, President Springfield, Massachusetts

(Concluded from Page 86)

—Supt. John H. Beveridge of Omaha, Nebr., who was recently reelected for a three-year term by the Omaha board of education, has completed ten years of service as the head of the school system. In reelecting Mr. Beveridge for another term, the board extended to him its appreciation of his splendid work in the following brief resolution:

"At the opening of the school year 1926-27, the board was confronted with a most difficult and perplexing situation, due to the rapidly increasing cost of maintaining the schools of the city at the same high standard; and, whereas at the close of the year it was found that the schools had lived within the budget, and that there had been no lowering of efficiency, but instead a healthy growth and development, the result is extremely gratifying to the board. It is recognized that this result had been made possible only by the unsparing effort and exceptional ability of Superintendent Beveridge and of those who have loyally labored with him as teachers and as administrative staff.

"Resolved, that the board of education of Omaha extend to Superintendent Beveridge, and through him to his associates, the sincere appreciation of his splendid accomplishment, and the assurance of the board's confidence in his leadership and ability as an educator and administrator."

—The Committee on Objectives of the North Carolina Education Association, in its report to the association, has reemphasized the importance of the eight months' term, and expresses regret that the constitutional amendment making possible the eight months' term was not given attention by the last legislature.

The committee in its study found that the eight-months' school term is mainly a problem in rural education. It is the biggest and most difficult problem of all educational problems the state is now facing. The eight-months' term concerns the rural children mainly, because no white children and less than 5,000 colored children living in cities attend a school whose term is less than eight months. The advantages of the eight months' term, it is urged, should be extended to the remaining 35 per cent or the rural pupils.

The committee points out that North Carolina is losing much potential leadership today and in coming generations through the inability of the 179,404 white children in schools of less than eight months to get a training which will equip them to compete on a reasonable basis of equality with the children more forward.

—Boston, Mass. The school board has refused to allow leave of absence to American Legion members among teachers and employees to attend the Paris convention in September. The members felt that the financial situation prevented their granting this privilege at either half or full pay.

—Haverhill, Mass. The school board has increased the high-school tuition fee from $25 to $100.

—The school board of Mexico, Mo., has purchased a piece of ground comprising 88 acres which will be laid out and operated as an athletic field and playground. The site is within a short distance of the public square of the city and will be accessible to the public.

—Lynn, Mass. The school board has adopted a new bookkeeping system. An increase in the bookkeeping staff is proposed in accordance with the recommendations of the survey committee. The board has adopted a rule which provides that teachers who marry will be automatically dismissed.

—Atlanta, Ga. The school board has reestablished the positions of superintendence of maintenance and heating engineer, which had previously been eliminated.

—Mexico, Mo. The school board has adopted a tuition fee of $60 per year for nonresident high-school students, and $30 per year for grade pupils.

—Glendale, Calif. The school board has approved the establishment of a recreation board which is to be representative of the city and the public-school system, and which will have entire charge of the local recreational activities. The board will consist of one member from the school board, one from the parks and playground commission, the park superintendent, the city superintendent of schools, and a fifth member to be selected by the other four members.

—The school board of Kewanee, Ill., has approved a proposal of the Kewanee District Fair Association to turn over the grounds and the concrete stadium to the public schools. The stadium will be remodeled and improved for school use.

—The supreme court of Nebraska has held that a school contract is valid and that a school board may be required to pay a teacher whose contract was repudiated. The court has ordered that the school board of Hildreth pay to Guy D. Dunbar the sum of $1,700 specified in a contract which the board had repudiated during the school term of 1923-24.

—El Paso, Texas. The school board has passed a rule which requires that pupils who mark or mutilate schoolbooks must pay for the damage. A total of 32,000 books has been cleaned, pressed, and placed in condition for the next year.

—Students of the public schools of Salamanca, N. Y., who are in debt to the school, or have equipment to be returned, were required to cancel their debts before they were given diplomas last June. Blank diplomas were given at graduation time to be filled out when the bills were paid or equipment returned.

—The adoption of arithmetic books for the schools of Springfield, Missouri, during the last month of the school term, was the occasion for a spirited controversy between the superintendent and the school board. During the discussion of the textbook question, veiled charges were made that the superintendent had used undue influence with the teachers' committee which made the recommendations for the textbooks, and the superintendent retaliated by emphatically denying that he had in any way tried to influence the committee in its deliberations. An argument also arose between the superintendent and the chairman of the textbook committee over the questions asked by Dr. J. P. Ferguson of a book agent during one of the discussions. Dr. Ferguson declared that he made no charges of any underhanded methods employed by the superintendent, but merely took exception to some of the views the superintendent had in opposing him.

At a later meeting it was decided to adopt the recommendations of the teachers' committee governing the adoption of arithmetic textbooks and to reject the report of Dr. Ferguson recommending the adoption of the second book on the list of proposed texts. The differences of the school officials were amicably adjusted and the superintendent was absolved of any improper connection with the report of the teachers' committee.

The entire matter constitutes a case study in school administration, proving that frankness and candor on the part of the school administrator wins out in most instances.

—The school board of Cambridge, Mass., recently gave permission for the collection of a voluntary offering in the schools to reestablish the Boston Floating Hospital for sick children.



Equipped with Lupton Projected Steel Windows. West Palm Beach High School, West Palm Beach, Florida. William Manley King, Architect. J. C. Hanner Constr. Co., Contrs.

MAKE THE MOST OF NATURE'S GIFTS

WHERE skies are always sunny and soft southern breezes blow, it would be hard indeed to study—or to teach—in a close and cooped-up room.

But class rooms equipped with Lupton Windows are not confining. Studying is less of a task in the abundant daylight and well-regulated ventilation that these up-to-date steel windows provide.

Lupton engineers are at your service without obligation to recommend, for your school, windows approved in operation and fire-safety as well as harmonious in design. Why not call on them?

LUPTON

DAVID LUPTON'S SONS CO.
2205-8 East Allegheny Ave., Philadelphia
Pioneer Makers of Steel Windows for Schools
Ask for a copy of
"Lupton Windows for Schools"

Steel Windows for Schools

A VALUABLE STUDY OF SCHOOL-SUPPLY PROBLEMS

The present practices of boards of education in the selection, purchase, and distribution of school supplies have been subjected to a study by Professor C. J. Anderson of the University of Wisconsin. This study, which has been issued by the Research Committee of the National School Supply Association, touches upon some interesting methods and makes clear that insufficient attention has been given to the problem of purchasing and handling supplies. Educators have considered supplies a very minor matter in the administration of schools and have overlooked the fact that the expansion of the school program and the increased complexity of the school organization have made the selection and the methods of purchase and distribution of school supplies an important rather than an incidental function of the administration.

Prof. Anderson, in his study, sought to discover by whom school-supply orders are placed, when they are placed, how supply lists are worked out, how allotments of supplies are made, how supplies are accounted for, and how costs vary.

In the placing of orders for school supplies the greatest variation in practice was found. In 100 cities, ranging in population from less than 4,000 to upwards of 350,000, it was found that the larger cities tend to employ special officers to order supplies, while the smaller communities placed the responsibility with the superintendent of schools. Thus 93 per cent of cities having a population of less than 15,000 require the superintendent of schools to buy the supplies, while in cities of 50,000 and upward only 35 per cent of the cities permit the superintendent to be the controlling factor. In the larger cities it is sometimes the secretary, sometimes a special purchasing agent, and sometimes the business manager who places the orders.

The bulk of orders for supplies are placed during the months of May, June, July, and August. The peak of the year's purchases in all cities is in July, and the month of June is second in importance. The larger cities tend to place their orders no earlier than the small cities.

The annual lists of supplies to be purchased are always submitted to possible bidders in the larger cities, but the smaller communities sometimes purchase without bids. In fact in towns of less than 4,000, three of every four towns do not require bids. Relatively few cities ask for lump bids on their entire lists. A greater number ask for quotations on specific sections of the lists or on individual items.

Similar interesting variations in practices were found by Prof. Anderson in studying the standardization of supplies, the allotment of materials, and the storage of supplies. The great bulk of communities favor central storage and weekly regular distribution to individual schools.

The greatest variation in the per-capita cost of general supplies were found in various cities. The small towns spent less on the average than middle-size towns, but the largest cities spent the least amounts. In the per-capita costs the high schools were naturally in advance of the junior high schools and of the grades.

Professor Anderson, in summarizing his study, recommends among other things the following important improvements based on scientific determinations and local studies:

a) Cities should standardize the supplies which they purchase on the basis of the items furnished to the schools, the unit quantities used, and the quality insisted upon.

b) Annual estimates should be required by March 1 each year, and orders should be placed by April 1, for summer delivery.

c) Persons in charge of the supply lists should have definite knowledge of educational needs, and selections should be based on the teaching advantages, etc., of supplies.

d) Every school building should include a small storage room ample to house necessary supplies. At least one month's supplies are necessary in each building.

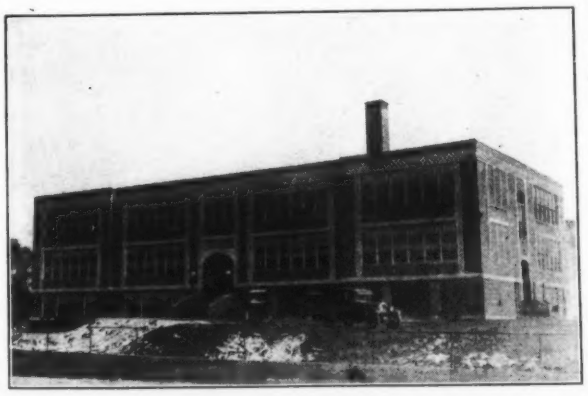
e) Accurate cost data should be obtained, making correct budget procedure possible. Lump sums for supplies are indefensible.

f) While schools should be prevented from wasting supplies by careful allotments and a perpetual inventory, sufficient amounts of supplies should at all times be insured.

g) The whims of individuals should not be permitted to increase the multiplicity of items bought. Acceptable standards as to size and quality should be established and adhered to.

h) Local orders should never be placed through janitors, principals, or teachers. A central agency should make all purchases.

i) There is a great need for a simplified accounting system, and for standardized record forms.



NEW ROSTOVER TOWNSHIP HIGH SCHOOL, BELLE VERNON, PA.

VACATION SCHOOLS REDUCE OVERSIZE CLASSES THROUGH ELIMINATION TESTS

A recent report on the vacation schools of New York City shows that approximately 2,500 boys and girls have been dismissed from the seven vacation high schools as a result of elimination examinations. The examinations which are given every year are for the express purpose of reducing the extraordinary size of the classes in six of the seven schools. In some of the smaller classes, students classified as slow were dropped. Special attention is given to boys and girls taking two subjects, and unless such students maintain passing grades each week, they are advised to drop one subject.

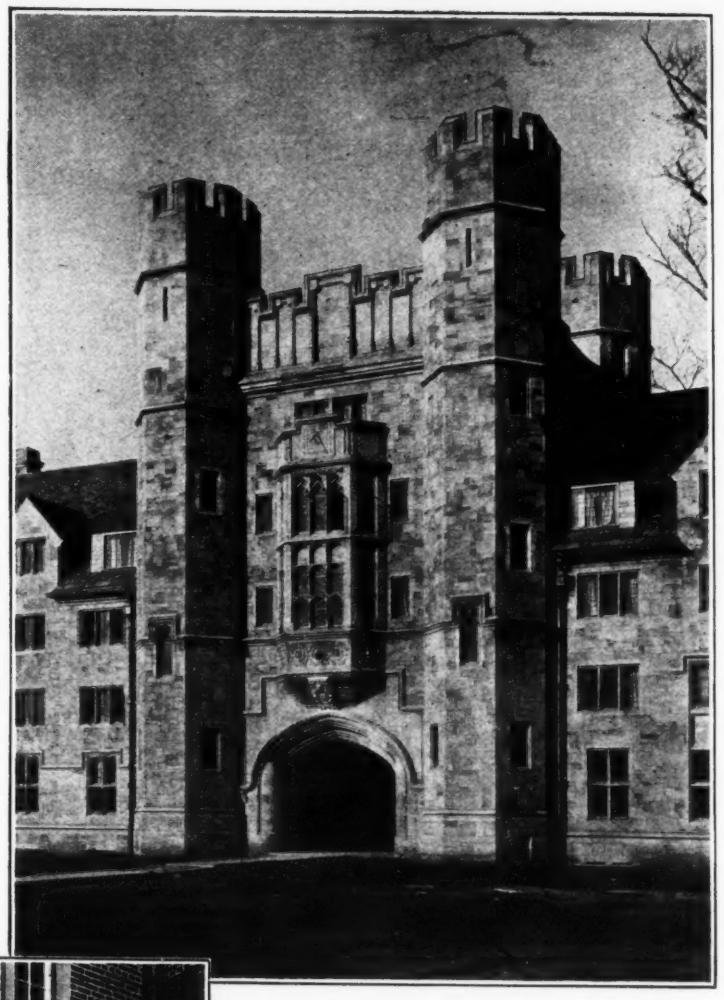
The board of education has issued orders to the principals that classes must be reduced to at least 45 students as a maximum pupil-load in each class, and if possible to 40.

Dr. William E. Pulsifer of D. C. Heath & Company, New York City, on July 24, was given a corresponding membership in the Royal Spanish-American Academy of Cadiz, Spain. The Academy has corresponding academies at Madrid, Barcelona, and other cities in Spain and Spanish America. The certificate of membership includes a diploma given by the same institution and is presented in honor of the work done by Dr. Pulsifer as president of the Heath Company.

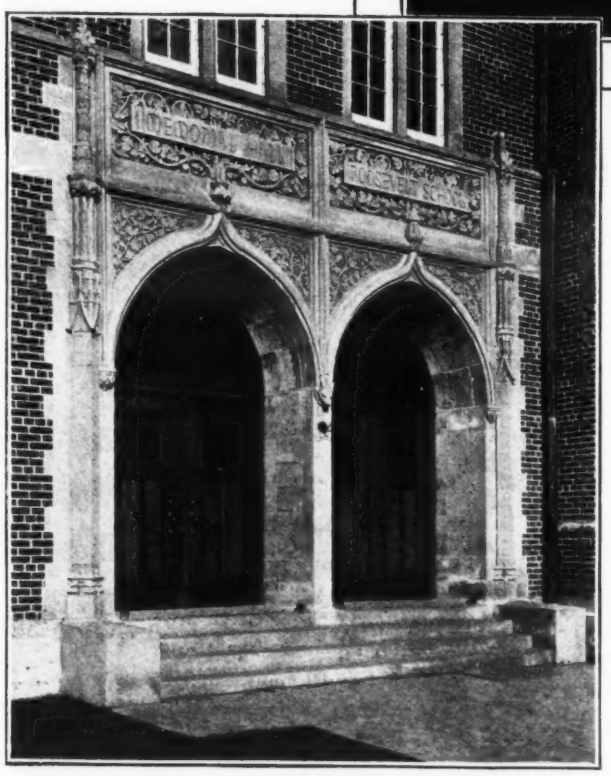
· *The* NATION'S BUILDING STONE

Your NEW SCHOOL *Buildings*

—how will they compare with those of other communities? Write for free booklet showing the use of Indiana Limestone in modern school structures



Women's Dormitory, Indiana University, Bloomington, Indiana. Granger, Lowe & Bellenbacher, Architects. Built of Variegated Indiana Limestone.



Entrance, Roosevelt School, River Forest, Illinois. Perkins, Fellows & Hamilton, Architects.

THERE is no field in which the experience of others holds more that is valuable than in school construction. Structural merit and permanence are just as important as efficient floor space arrangement. We have a handsomely illustrated booklet showing many of the fine school buildings throughout the country that have used Indiana Limestone either as trim or entire facing for walls.

Take time now to write us for a copy of this valuable booklet. What it contains may prove of tremendous help to you in your task of planning a new building.

Indiana Limestone is so ideal for school-building purposes that this beautiful natural stone has been used in many of the finest school structures of the country. The pleasing light color tone of Indiana Limestone in combination with walls of brick gives such an attractive exterior that hundreds of school boards and school architects have been won to its use.

New ways of producing and using Indiana Limestone have reduced its cost. As a result, many schools, like college buildings, the country over, are now built with all-stone exteriors. Walls faced with Indiana Limestone remain beautiful year after year without expensive cleaning or costly repairs. This low exterior upkeep expense is a factor of decided importance in school construction.

Whether in your new building you use Indiana Limestone as trim or have the entire building faced with it, you will have a structure that will be beautiful and yet moderate in cost.

To get the free booklet

Just send us your name and address and we'll send you a free copy of "Indiana Limestone for School and College Buildings." Address Box 780, Service Bureau, Indiana Limestone Company, Bedford, Indiana.

INDIANA LIMESTONE COMPANY

FOR MANY YEARS WE HAVE SPECIALIZED IN BONDS OF SCHOOL DISTRICTS. UNUSUAL PROBLEMS WILL BE GIVEN OUR BEST ATTENTION.

C. W. McNEAR & COMPANY

ESTABLISHED 1908

FIRST NATIONAL BANK BLDG.
CHICAGO

EQUITABLE BUILDING
NEW YORK

SCHOOL FINANCE AND TAXATION

SOURCES AND DISTRIBUTION OF SCHOOL FUNDS

The United States Bureau of Education has issued a report in which it shows in many states property tax is the sole source of school funds as well as the only source of support for all local and state government. This means that property is becoming more and more heavily burdened, and as a result, states are endeavoring to find new methods of taxation for school income.

The Bureau finds that the states are employing corporation taxes, income taxes, and other types of taxes instead of, or in addition to, general property taxes as a means of producing state school revenues. For example, schools in New Hampshire, Maine, New Jersey, Virginia, California, Delaware, and Wisconsin are supported in part by one or more of the following: Corporation tax, bank tax, railroad tax, public service, and insurance companies tax. Income taxes are used for schools in Massachusetts, North Carolina, Arkansas and Delaware; inheritance tax in California, Virginia, Louisiana, Michigan, and Kentucky; severance tax in Louisiana and Arkansas. State income taxes for schools are considered an excellent source of funds. The use of this source has not extended as rapidly as its advocates hoped, because of the creation of the federal income tax. The severance tax is levied on all natural products obtained from the soil, except agriculture.

The necessity of some type of equalization fund coming from state sources is becoming generally recognized. Twenty-four states now provide state equalization funds in varying forms and in varying amounts. The amount and method of distributing equalization funds is a problem which the Bureau says must be carefully worked out in each state on the basis of its school needs and conditions, administrative organization, methods of taxation for the support of public institutions and the like.

The most common methods of distribution of state funds are: (1) Per-pupil basis, either school census, average daily attendance, aggregate attendance, or enrollment. Forty-five states distribute some or all of their funds on one of these per-pupil bases. (2) Per-teacher basis, including number of teachers, graduated grant proportioned to salary basis, graduated grant proportioned to qualifications basis. Sixteen states use one or more of these in distributing some of their state funds. (3) On some specifically equalizing basis. Twenty-four states now have equalizing funds. (4) Miscellaneous bases or combinations of different bases.

Of the different methods, distribution on the census basis is considered least equalized in effect. School-enrollment basis, average daily attendance or aggregate-attendance basis, number of teachers employed, distribution of state money in inverse ratio to the tax valuation of the unit to which it is distributed and the direct ratio to the tax rate, are other methods of distribution which are considered better. In some states combinations are employed with advantage.

Another plan used extensively is that of encouraging progress in individual communities by rewarding through state funds special effort on the part of local districts. Under this plan, the state matches dollar for dollar a certain maximum amount raised by a local district. While this plan tends to promote progressive practices in individual communities, it has not the same claim as a state responsibility as that of equalization of educational opportunity. Of the two the latter is of more importance.

PER-CAPITA COST OF INSTRUCTION IN NORTH CAROLINA

—The North Carolina Department of Public Instruction, in one of the late reports, attempts to analyze the major portion of current expense—the 77 per cent. It shows the per-pupil cost of instruction and endeavors to arrive at a satisfactory explanation of the increase in cost and to account for the differences in cost in the several units of comparison.

The report shows that 77 per cent of the total amount, $22,822,834, spent for running the schools in 1925-26, was for salaries of teachers and principals. It cost $17,581,208 to instruct 818,739 children enrolled in school that year. The remaining 23 per cent was spent for such items as fuel, janitor service, supplies, light, water, transportation of pupils, and overhead expense of administration.

In 1925-26 the average cost of instruction in all elementary and secondary schools for the white race was $26.54, and for the colored race it was $10.24. This was an increase of $1.18 for the white race and $0.50 for the colored race over the preceding year, or $12.50 more than in 1919-20, and $19.39 more than in 1914-15. If only rural schools are considered, the average cost of instruction was $22.49 a year for each white pupil enrolled, and $8.38 for each colored pupil. If city children are considered, it cost an average of $39.27 in the white schools, and $16.46 in the colored schools for instruction purposes.

In group one, which consists of the eight largest cities in North Carolina, it cost an average of $48.18 per pupil in the white schools, and $21.36 per pupil in the colored schools. In group two, it cost slightly more than the state average in white schools and less than the state average in colored schools. In the third group, instruction cost is $36.58 per white pupil and $15.71 per colored pupil.

The highest cost in any particular city, according to the report, was in Durham, where the cost was $56.63 for each white child enrolled. It is shown that around the state average of $26.54 for the white race, the range of cost is from $56.63 to $14.36 and around the $10.34 state average for the colored race, the range is from $26.68 to $4.70.

Among the reasons given for the increase in cost of instruction are: lengthening of the school term, the increases in the salaries of teachers, and the improvement in the training of teachers. Other factors which have an influence on the cost are the decrease in the purchasing power of the dollar, the number of pupils per teacher, and the increase in the number of high-school pupils.

NEW YORK STATE MAYORS SCORE RISING SCHOOL COSTS

Ever since the New York state legislature in 1917 revised the education law of the state and separated education from municipal functions and city controls, the mayors of cities of the state have constantly sought to recover control of school budgets. The New York State Conference of Mayors has annually endeavored to induce the legislature to give the city officials control over school expenditures.

During the coming school year it is believed the biggest battle will be fought, for the mayors have

(Continued on Page 94)



JEFFERSON AVE. PRESBYTERIAN CHURCH, DETROIT

Smith, Hinchman & Grylls, Architects

W. E. Wood Co., General Contractors

Detroit Decorative Supply Co., Plasterers

Par-Lock applied to inner surfaces of all exterior walls by the Par-Lock Appliers of Michigan



Par-Lock in Church Architecture

THE enduring purpose of a church is such as to forbid makeshifts. For a lofty, dignified interior which is to inspire and express the spiritual hopes of successive generations of worshippers; nothing less than permanent construction is to be considered.

Par-Lock is an essential part of the specification for a modern church edifice. It protects the plastered surfaces against filtration and condensation, insures perfect key and safeguards against cleavage. Its saving in redecorating costs alone is a compelling reason for Par-Lock.

THE VORTEX MANUFACTURING CO.
1987 West 77th Street Cleveland, Ohio

Par-Lock
PLASTER KEY

Write *Par-Lock Appliers of*—(name nearest city) with address as below

ALBANY, 425 Orange Street.
BALTIMORE, 613 West Cross Street.
BETHLEHEM, PA. 215 Vineyard Street.
BOSTON, 45 Commercial Wharf.
BUFFALO, 958 Ellicott Square Bldg.
CHICAGO, 122 S. Michigan Ave.
CLEVELAND, 404 Hunkin-Conkey Bldg.
COLUMBUS, 751 South Cassingham Rd.
DETROIT, 2511 First National Bldg.
KANSAS CITY, MO. 2035 East 19th St.
MINNEAPOLIS, 200 Builders Exchange.
NEWARK, N. J. 24 Commerce Street.
NEW YORK CITY, 50 Church Street.
PHILADELPHIA, 1700 Walnut Street.
PITTSBURGH 207 Fulton Bldg.
SCRANTON, PENNA. Cedar Avenue.
ST. LOUIS, 515 Chemical Bldg.
TORONTO, 2258a Bloor Street, West
TRENTON, 339 Broad St. Bank Bldg.
YOUNGSTOWN, 503 City Bank Bldg.
WILKES-BARRE, PENNA. 904 Second Nat'l Bank Bldg.

PAR-LOCK CORK INSTALLATIONS, United Cork Companies, Lyndhurst, N. J.



HARDING JUNIOR HIGH SCHOOL, LAKEWOOD, OHIO.

"Our Troubles Decreased As Use of Dudley Locks Increased"

Mr. Meeks had tried them all: key locks and click combination locks. The silent and safe Dudley won over the principal as well as his students. The 600 additional locks have been ordered.

It is not too late to begin with the Dudley lock *right now*. Remember, it gives you both safety and control. It is pick-proof and fool-proof; guaranteed for five years. Complete master-chart service is furnished with each installation.

Send *today* for sample Dudley lock for free examination, also details of our self-financing plan.

Triple Metals Corporation
107 N. Wacker Drive, Dept. 16, Chicago.

HARDING JUNIOR HIGH SCHOOL
16600 HILLIARD ROAD
LAKEWOOD, OHIO

May 25, 1927.

Triple Metals Corporation,
Chicago, Illinois.

Gentlemen: We have been using Dudley locks in our school for over a year.

When our school was organized in September 1925, we left it to the individual pupil to provide himself with locks as he chose. We soon had our troubles. Click combination locks were picked, cheap key locks were broken or had keys broken off in them. Where the better key locks were used the keys were lost or left at home.

When one of your salesman demonstrated the silent combination lock with its 64,000 possible combinations and a breaking strength of 2000 pounds, we were won over at once.

We purchased 1000 locks and expect to get 600 more before September 1927. Our lock trouble has decreased as the use of Dudley locks has increased. Pupils have not been compelled to use the school lock, but of their own choice most of them have changed to it so that by next fall the use of the Dudley lock will be practically 100%.

Sincerely yours, Robt L. Meeks.
Principal.

(Continued from Page 92)

succeeded in getting the legislative committee on taxation and retrenchment to make an investigation which the mayors believe will disclose a liberality of school spending that has far outrun the expansion of the school system. As the city officials see it, one of two policies must be adopted: Municipal control should be voted or the state should make its control complete and provide for complete state financing of education.

Facts gathered by the special committee of the mayors' conference reveal the huge increases in school expenditures since 1917 and the added fact that these increases are many times greater than the rate of increase of pupils taught or of teachers employed.

The increase in the number of teachers employed has been only 25 per cent, but the cost of instruction service has increased approximately 275 per cent, and the expense of maintenance 300 per cent.

In the nine years since 1917 the increase in pupils taught has been 30 per cent, but current expenses for education have increased 300 per cent, debt service for education 375 per cent, and capital outlay 1,700 per cent.

LEGISLATIVE COMMITTEE TO BEGIN STUDY OF SCHOOL EXPENDITURES

The special joint legislative committee of New York state has made plans for a statewide investigation of school expenditures and the relation of school boards to municipal authorities during the fall. The inquiry will cover the relation of the state education department to school authorities in the cities and the domination exercised over them.

It is planned to hold hearings on the matter this fall in the cities of New York, Albany, Buffalo, and other localities directly interested in the problem. Prominent educators and city officials will be present at these hearings to offer suggestions and to give advice.

The chief problem with which the mayors' committee will be concerned is the enormous increase in school expenditures, and also the fact that school authorities are increasing their budgets without regard to the needs of municipalities. The mayors contend that their administrations are held responsible for the entire budget in which education appears as the largest item, and yet they have no control or authority over appropriations for buildings, or for maintenance and instruction. They insist that the time has come when the state must either take over the supervision and control of the financing of public education as a state function, or go the limit in granting to cities complete home rule in matters of education as well as all municipal departments.

THE NEW YORK SCHOOL BUDGET

—The budget of the New York City board of education will call for approximately $112,000,000, exclusive of the $14,000,000 to be reserved for increasing salaries and which will be financed out of the additional state school funds.

In addition there will be included a request for $35,000,000 to enable the board to speed up the building program. This is $10,000,000 more than was requested this year.

The largest increases in budget estimates are for instruction, fuel, repairs, and fire prevention. Aside from these, the increases are nominal.

The increased cost of coal and the necessity to provide an increased number of schools call for $300,000 more. The repair budget will be increased $450,000 and provision will be included this year for $300,000 for fire-prevention work which formerly has been a corporate stock item.

The gross total of the budget estimates from the reservation for salary accruals resulting from the replacement of high-salaried teachers with new teachers at minimum salaries, will net about $5,000,000 and will keep the total below the $112,000,000.

FINANCE AND TAXATION

—The board of education of San Francisco, Calif., proposes to ask for an increase of $1,250,000 for new buildings. They asked the supervisors for $2,500,000 and received $1,200,000. The supervisors have claimed that the board is extravagant. Under the law the supervisors are complying with the legitimate demands of the board who are said to have managed the financial affairs with reasonable economy.

—The Augusta, Ga., board of education with one dissenting vote agreed to suspend all salary increases for the present. The salaries of those who are already enjoying an increase will be reduced five per cent.

—The board of education of Kansas City, Mo., has placed its funds in five different banks offering the highest rate of interest. The interest paid is from 2.50 per cent to 2.75 per cent.

—The per-capita cost of education in Bridgeport, Conn., has been placed at $85.93 for the year 1925-26. Other New Jersey cities show the following per-capita cost: Hartford, $121.67; Meriden, $113.13; New Britain, $88.70; New Haven, $87.61; Stamford, $108.09; Waterbury, $105.77. The cost of maintaining high schools in the several cities is as follows: Bridgeport, $153.69; Hartford, $187.89; Meriden, $159.07; New Britain, $153.00; New Haven, $111.96; Stamford, $166.28; Waterbury, $176.10.

—The New York City board of education recently awarded contracts for new buildings amounting to $1,000,000.

—The voters of Hart, Hopewell, Evening Star, and Bald Hill school districts, Oklahoma, defeated a $32,000 school-bond issue.

—A $25,000 school-bond issue was carried at Holland, Michigan, by a majority of fifteen votes.

—Newark, N. J., plans to spend $5,000,000 for new school buildings. The program includes one high-school building.

—The members of the Virginia, Minn., school board reaffirmed their decision to float a $300,000 school-bond issue for the construction of a $750,000 junior high school. The question will be submitted to the voters for approval.

—A school-bond issue was defeated in the Elvin school district, Missouri, for the third time this year.

—Glenn Cove, N. Y., proposes to raise $250,000 by bond issue for new schools.

—A $14,000 school-bond issue was carried in the Orchard school district near Vancouver, Washington, by a vote of 173 to 125 when it was discovered that the result was a few votes short of the 60 per cent majority required by law. Another election has been called.

—The school board of Parkersburg, W. Va., held 1750 shares of stock in the local bridge which it contracted to sell at $100 a share. A citizen protested the sale and offered $300 a share. The matter went into the courts with the result that the sale at the higher figure was ratified.

(Continued on Page 97)



Wm. Jewel College Memorial Auditorium, Liberty, Mo. Acousti-Celotex makes the programs given here more enjoyable because it absorbs echoes and quiets distracting noises. Also, the Acousti-Celotex tiles give a neat decorative effect to the ceiling. Chas. A. Smith, Architect; R. V. Aycock Co., Acousti-Celotex Contractor.

Noise wastes energy... *retards mental effort*

But you can quiet *noise with Acousti-Celotex, applied to walls and ceilings*

EVERY noise that disturbs students uses up valuable energy, and induces early fatigue. This lowers the quality of school-work they are able to do, as well as the quantity. And these echoing noises, in school auditoriums, greatly decrease the worth and enjoyment of programs.

School authorities everywhere are improving these conditions with Acousti-Celotex. This material has remarkable sound-absorbing qualities. It creates quiet by the simple process of *swallowing-up* distracting noises and echoes. And since it comes from the factory in finished, complete units, its application is no more complicated than redecorating your walls.

You can paint Acousti-Celotex without destroying its sound-quieting efficiency. This is because the sound-absorbing qualities of Acousti-Celotex are *built-in.* Perforations in the Acousti-Celotex tiles, make its acoustical properties *fool-proof.* And no complicated installation processes are necessary. Acousti-Celotex is easily installed in any building—new or old.

Already used extensively in auditoriums, architects now are recommending Acousti-Celotex for class rooms, shops, corridors, gymnasiums, chapels, cafeterias, band and chorus rooms.

Write, now, for the new Acousti-Celotex book. Learn how schools everywhere are using this remarkable *single unit* sound-absorber. If there are points you do not fully understand, The Celotex Company will gladly have its nearest representative call on you.

THE CELOTEX COMPANY, Chicago, Illinois
Mills: New Orleans, Louisiana
Branch Sales Offices in many principal cities
(See telephone books for addresses)
Sales Distributors throughout the World

ACOUSTI—CELOTEX
FOR LESS NOISE—BETTER HEARING

THE CELOTEX COMPANY, Acousti-Celotex Dept.
645 N. Michigan Ave., Chicago, Ill.
Please send the Acousti-Celotex book to

Name.....

Address.....

City..... *State*.....

A. S. B. J.—9-27

To Make Your School Building Attractive

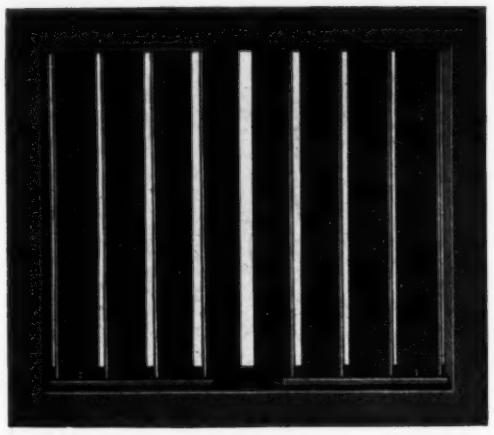


PLATE K-88

AIR DIFFUSER

To provide more effective distribution of air from supply opening. Vertical blades adjustable. Felt strips prevent dirt streaks on wall.

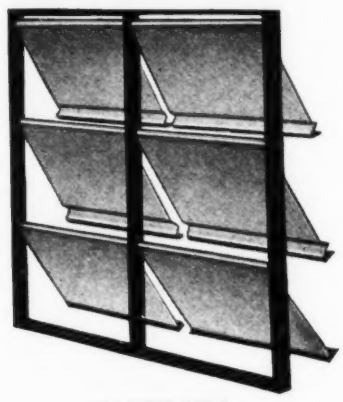


PLATE BPD



PLATE F-3-BPD

ALUMINUM BACK-PRESSURE DAMPERS

Located at bottom of vent flue to prevent back draft. Aluminum dampers felt lined to prevent clatter. Furnished with or without wall frame.

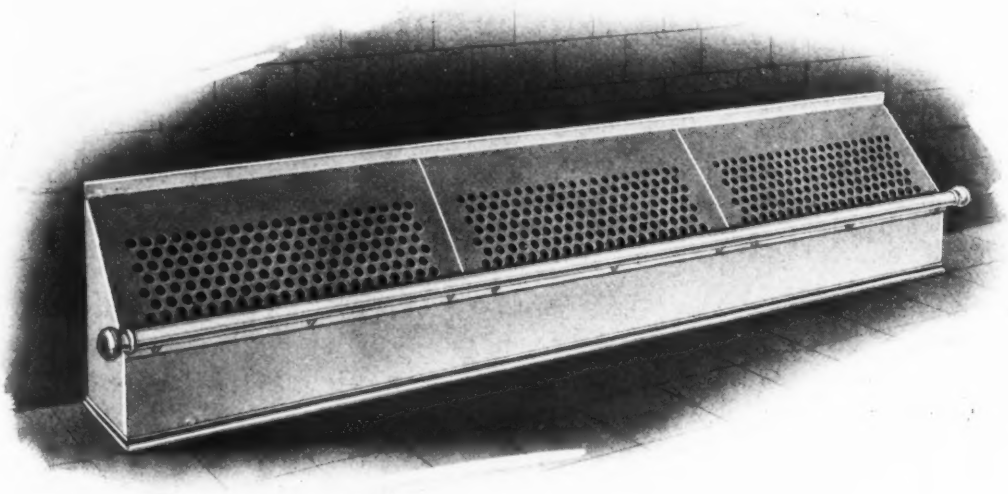


PLATE F-151

AMERICAN FOOT WARMER

AMERICAN FOOT WARMER

Excellent for drying children's clothing. Made of cast iron and indestructible. Made in two-foot sections any length.

We manufacture a complete line of volume, splitter, double mixing, etc., dampers for the control of air in all types of Heating and Ventilating Systems.

BLACK DUCO FINISH IS STANDARD ON ALL BUT PLATE K-775M. OTHER DUCO COLORS IF ORDERED.

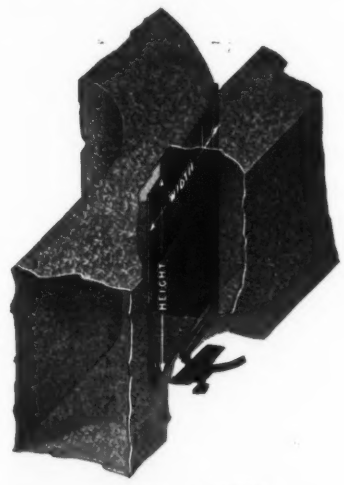


PLATE K-775M

SPLITTER DAMPERS

Specify "American" Ventilating Specialties

Made by

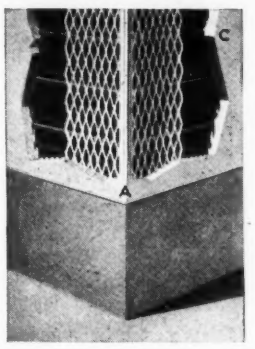
American Foundry & Furnace Company

BLOOMINGTON, ILLINOIS.

FIRE



...can't lurk in Milcor protected walls



MILCOR

"Expansion" Casings eliminate expensive wooden door-and-window trim. This modern metal product should be built into every school, for economy, better appearance, greater permanence, lower decorating cost, less upkeep expense and for the improved sanitary conditions which are thus assured.

Famous school architects have adapted Milcor "Expansion" Casings and other Milcor products very successfully to schoolroom requirements. We shall be glad to extend to you the benefit of our experience, without cost or obligation.

FIRE finds no hiding place in which to stalk its victims and leap unexpectedly upon its prey, if walls and ceilings are plastered on Milcor Metal Lath and allied products.

Even should Fire succeed in seizing upon the combustible furnishings of a room, it is blocked when it reaches walls protected by Milcor products. Plaster on Milcor Metal Lath, even with wood stud construction confines Fire to the room in which it starts for at least one full hour.

In addition to supreme firesafety, Milcor construction offers greater rigidity and permanent freedom from cracks, streaks, sagging and other dangers that mar appearance and cause expensive repairs.

Before you build a new school or remodel the old one, find out all about the complete line of Milcor metal building products.

MILWAUKEE CORRUGATING CO., Milwaukee, Wis., Chicago, Ill., Kansas City, Mo., LaCrosse, Wis.

MILCOR

FIRESAFE METAL BUILDING PRODUCTS

MILWAUKEE CORRUGATING CO., Milwaukee, Wis.
Gentlemen:—Please send, without cost or obligation, the data books, as checked here:—
☐ The Milcor Manual on Metal Lath and allied products.
☐ The Milcor Architectural Sheet Metal Guide on Roofing, etc.

Name.....
Address.....
City.....
State.....
☐ We are planning a new building.
☐ We are planning to remodel.



Send for these Valuable Books on Safe Construction

The 80-page Milcor Manual contains important technical facts on metal lath construction and Architectural Specifications for firesafe buildings. There are many methods and products described in this Manual, with which you should become familiar before deciding on any construction expenditures. Milcor engineers will be glad to cooperate with your Building Committee, without cost or obligation.

The Milcor Architectural Sheet Metal Guide features Spanish Metal Tile Roofing and other Milcor Products, also essential to safest construction. Use the coupon or write us a letter outlining your plans.

(Continued from Page 94)

—The bonds amounting to $250,000 issued by the Westfield, N. J., board of education were sold to the teachers' pension annuity fund in Treaton, New Jersey, at 4⅜ per cent.

—Boston, Mass. The mayor in returning the appropriation order of the school board has ordered a further reduction of $150,000 in the estimates of the board. Following a veto of the orginal appropriation by the mayor, the amount was reduced by $200,000, and the present reduction makes a total reduction of $350,000 from the original estimates which totaled $6,059,293.

—A large majority of the town and special school districts of Arkansas have increased their school levies from twelve to eighteen mills.

—At a special election on July 16, the voters of Pulaski county, Arkansas, approved the county-unit system of organization. Pulaski county is the first county in the state to adopt the new system which was recently authorized.

—Bemidji, Minn. The school tax problem has been satisfactorily adjusted. The tax is now three mills higher than the average for the state. It has dropped to this point from among the highest.

—An appropriation of approximately $112,000,000, the largest ever sought for educational purposes in New York City, has been requested for the operation of the public-school system next year, according to the officials of the board of education. An increase of between four and four-and-a-half millions over this year's budget of $107,494,000 is indicated in the estimates of the board.

The total estimate includes all fixed charges for the operation and maintenance of the school system, which are covered by the general and special school funds on the basis of the existing organization and indicated growth during the coming year. It does not include an estimate for increasing teachers' salaries as the board has not acted upon the report of the mayor's salary committee, nor does it include an estimate for the school construction program of 1928.

—The board of education of St. Joseph, Mo., has been obliged to adopt a retrenchment policy for the next year because of a reduction in the school funds. A six per cent reduction in teachers' salaries has been placed in effect for the year 1927-28. The lack of funds has been attributed to the failure of the legislature to pass certain revenue measures which would have placed the school funds on a more substantial basis.

—The North Carolina Department of Public Instruction has recently issued a report on "Current Expense Distribution" which presents facts on expenditures for the school year 1925-26. The expenditures are divided into three parts, namely, teaching and supervision; administration; and operation and maintenance.

The report shows that the rural systems of the state spent $14,839,648 in 1925-26, or 65 per cent of the total. The city systems, on the other hand, spent $7,983,185, or the remaining 35 per cent. During the year there were 623,759 or 76 per cent of the total children enrolled in rural schools and 194,980 or 24 per cent in the city schools. The per-capita-current-expense cost was $23.79 for each rural pupil and $40.94 for each city pupil. More was spent, $17.15, on an average for each city child than for a rural child. North Carolina ranks ninth in per-capita current expenditures. The sixteen southern states had per-capita current expenditures based on pupils enrolled as follows:

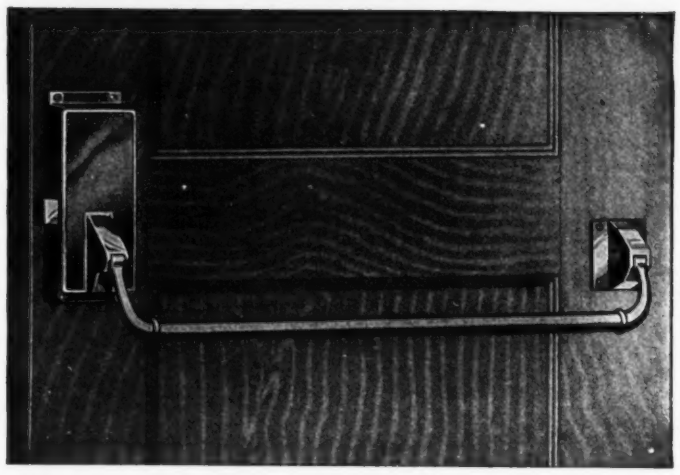
Maryland, $55.42; West Virginia, $48.27; Missouri, $47.89; Oklahoma, $43.44; Louisiana, $36.46; Texas, $36.23; Florida, $35.52; Virginia, $29.25; North Carolina, $26.34; Kentucky, $25.48; South Carolina, $21.62; Tennessee, $21.35; Alabama, $19.85; Georgia, $18.09; Arkansas, $17.44; Missis-



DIXIE PORTLAND MEMORIAL SCHOOL, RICHARD CITY, TENN.
The school was built by the Dixie Portland Cement Company as a memorial to the employees of the company who served in the World War. Mr. Robert N. Chenault is director of the school.

Smith's IMPROVED PANIC EXIT LOCKS

Smith's Improved Exit Locks are the Best Locks Made for Schools, Theatres, and Industrial Plants







Patented Dec. 1, 1925

Made in solid bronze or solid brass throughout. Exceptionally strong and simple in construction and operation.

Exit only Lock contains only 4 workjng parts.

Exit and entrance Lock contains 9 working parts.

Can be used on single doors or on double doors with center mullion. Size of case, 9 x 3¼ x 1½ in.

Installation made very quickly—No Mortising required.

No auxiliary bolt required, therefore no delicate movements.

Only one spring and that to eject bolt.

Positive locking feature operated with heavy gears, and not depending upon springs.

Permanent dog under cam, so constructed as to take up any wear which might occur.

Bolt projects ¾ in. from lock case, enabling bolt to have sufficient contact with strike in the event of door shrinking.

Ideal for thin as well as heavy doors.

Operates perfectly in conjunction with standard make of door closers.

Made to meet the use and abuse to which a school door lock is subjected.

NOW MADE BY **The Steffens-Amberg Co.**
Newark, New Jersey

WRITE FOR CATALOG

(Continued from Page 97)

sippi, $15.57. The average per-pupil current expenditure for education in the United States as a whole was $58.97 during the year, therefore all the southern states are below the average.

Greensboro led the list of cities in the per-capita amount spent for teaching and supervision, $49.77. Salisbury led the second group of cities, at a cost of $45.89 per pupil. Durham was second among the eight largest cities and third among all the cities listed with a per-pupil cost of $45.79. The city per-pupil cost for teaching and supervision was $23 in Henderson. Hickory led the third group of cities with a per-pupil cost of $42.69.

The summary of the data shows that cities in group one had a rank of one, a total cost of $2,741,947 for teaching and supervision, and a per-capita cost of $40.99; cities in group two had a rank of four and a total cost of $1,087,182, and a per-capita cost of $32.54; cities in group three had a rank of three, a total cost of $1,051,831, and a per-capital cost of $33.11.

—The charge is made by the teachers of San Jose, California, that the school board of that city is saving money by reducing salaries and wasting it by expending it on temporary school buildings. The charge is denied by Pres. C. S. Allen of the school board. The teachers believe that the salary schedule is too low.

—A $400,000 school-bond issue or a new school building was carried at Birmingham, Michigan.

—The state board of education of Texas bought $600,000 worth of school bonds issued by the Amarillo board of education. The board had sold the issue to the Federal Commerce Trust Company, but the state stepped in and asserted its priority. The trust company protested the action of the state board on account of the fact that considerable expense had been incurred by them in connection with this purchase, and they already had done extensive advertising in the east on this issue. The state board held to its original action in buying the bonds, saying it not only had the right to buy them under the law, but they considered this particular issue of bonds high-class and that they had the money on hand in the permanent school fund which should be drawing interest for that fund, and refused to reverse their action.

—By a vote of 84 to 29 the voters of Baker, Montana, carried a $34,000 bond issue for a new grade school.

—S. M. N. Marrs, state superintendent of Texas, has announced that the state school-support fund would be about $15 per child, the largest in the history of the state. One is due to the increased gasoline tax which raised more money than was expected. The other is that no textbooks have to be purchased.

—Boston, Mass. In order to meet the current expenses of the school board and to provide funds for other school purposes to be specified during the financial year January to December, 1927, the sum of $6,059,293 has been appropriated by the board. The largest amount, $4,477,562, is for salaries of instructors and members of the supervising staff.

—The voters of Pe Ell, Wash., have voted on a five-mill school levy for school-operating expenses.

—Wichita, Kans. The school board has been asked to reduce the tax levy for schools from 16 to 15.9 mills.

—Little Ferry, N. J. The voters have been asked to approve the transfer of $6,000 from the current account to the repair and replacement account. The money will be used to secure the installation of additional plumbing in one of the schools. By transferring the money the board will avoid a loan, and will save the taxpayers about $360 in interest money.

—Fort Scott, Kans. A total budget of $223,030 has been adopted by the school board for the year 1927-28. The largest item in the budget is $238,925 for instructional service.

—Centralia, Wash. A school election was held to vote on an extra tax levy of ten mills for school purposes.

—Sioux City, Iowa. The school board's expenditures for the year 1927-28 will reach $1,773,382, which is an increase of $98,000 over the last year. The budget calls for a tax levy of 67 mills, which is 3.5 mills more than last year.

—The average per-capita cost of the city schools of Ponca City, Okla., is $58.45. For high-school students, the per-capita cost is $75.31 and for grade schools it is $41.59.

—Lincoln, Ill. The school board has adopted a tax levy of $85,000 and has outlined a budget totalling $93,000 for the year 1927-28.

—The school board of Council Bluffs, Iowa, has a budget which is $19,600 less than the 1926 budget.

—The school board of New Haven, Conn., has included in its budget for next year an appropriation of $1,527,000 for new building projects.

—The school-tax rate at Evansville, Ind., has been raised from $1 to $1.03 on each $100 of taxable property. The total cost of operating the schools in 1927-28 will be $1,844,134.

—Omaha, Nebr. The school board has adopted a budget for the coming year, totaling $4,319,000. There is a balance of about $140,000 remaining in the school fund, after removing a deficit of $116,000 with which the board started the year.

—Muscatine, Iowa. The proposed expenditures in the general fund for 1928 total $213,625 and for the schoolhouse fund $40,000. The estimated taxes per $1,000 of assessed value amount to $19.50 and the taxes in mills per dollar of taxable valuation amount to 78 mills. The taxable valuation for 1926 was $2,717,865.

—Galion, Ohio. The school board has adopted a budget of $171,120 for 1928, which is $3,475 less than the amount for 1927.

—The permanent school fund for Minnesota has reached $50,000,000 and is growing at the rate of $10,000 a day. Taxes on the mines provide the fund and keep swelling it.

—The school board of Punxsutawney, Pa., closed the school year with a balance in the treasury for the first time in a decade. The report showed a balance of $103 in the general fund and $1,891 in the sinking fund. In addition to the balance there is still $6,817 in uncollected taxes for the current year, while the sinking fund shows $11,000 worth of redeemed bonds. The financial condition of the school district is the best it has ever been.

—School Clerk J. F. Skeel of Pekin, Ill., in his recent annual report, shows that the city schools have a deficit of $99,000 for the year ending June 30. It is pointed out that tax values must be increased during the next year if the board is to meet all operating expenses of the schools. The expenses of the schools for the last year amounted to $625,568.

(Continued on Page 100)



Illustration shows a magnified cross-section of a Wooster Safe-Groove Tread. Note shape of carborundum ridge.

Hard Wear Actually Improves Wooster Safe-Groove Treads



Wooster Safe-Groove Treads are attractive in appearance too, and help to keep the rest of the building clean by acting as an automatic foot scraper in wet or snowy weather.

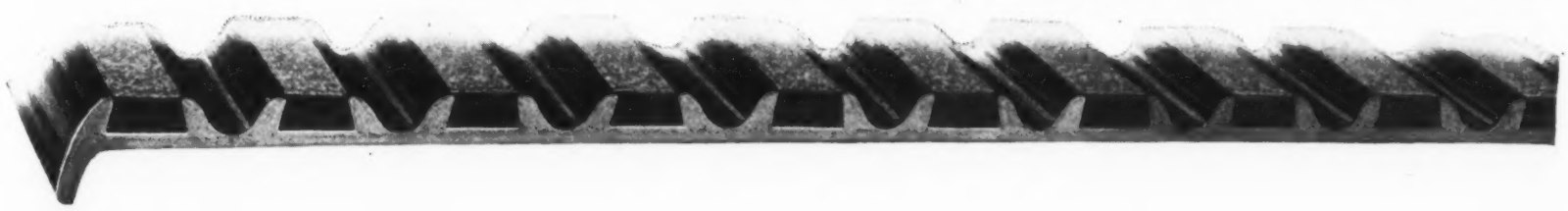
THE GRITTY carborundum anti-slip ribs of Wooster Safe-Groove Treads wear down more slowly than the metal base which grips them. The anti-slip material always contacts with the foot and because the carborundum rib is broader at base than at top, the area of anti-slip material increases with each year of wear.

Wooster Safe-Groove Treads are easily and quickly installed on new or old stairs of concrete, steel, wood or any material. Once installed they provide a constant factor of safety against injury due to slipping.

Dirt and debris which accumulates so quickly on stairs which are much used, automatically drops into the deep, narrow grooves of Wooster Treads and is held safely away from the foot. These deep grooves are easily cleaned with one stroke of a broom. The anti-slip surface is always clean. The foot can't slip on Wooster Safe-Groove Treads.

THE SAFETY STAIR TREAD COMPANY
P. O. Box 198-C :: :: Wooster, Ohio

WOOSTER
SAFE—GROOVE STAIR TREAD



The NORTON Closer With Hold Open Arms Is Best Suited For Schoolhouse Work

Every Schoolroom Should Have One

Use the Norton Liquid Door Closer with Hold-Open Arms and do away with door stop on botton of door.



1st. The doors are closed with a uniform speed, which gives the pupils a chance to go through a door without getting caught or injured.

2nd. Having two speeds, the speed at the latch can be set for absolute quiet—no latch necessary.

3rd. The Hold-Open Device connected with the arm of the Door Closer is automatic, a child can operate it—just a push or pull on the door is all there is to do it. Does away with door stop, hook, or strap to hold the door open.

SERVICE:—We have expert servicemen on call, free of charge.

PRICE:—The price is right. Send for a representative.

THE NORTON DOOR CLOSER CO.

2900-2918 N. Western Avenue, Chicago, Illinois.

A Partial List of Schools NORTON Equipped

Skinner Junior High School, Denver, Colo.

North East High School, Minneapolis, Minn.

Chicago Public Schools

Toronto Public Schools

East Side High School, Cincinnati, Ohio.

Cass Technical High School, Detroit, Mich.

Technical High School, Omaha, Nebr.

(Continued from Page 98)

—Peoria, Ill. The school board has adopted a budget calling for $114,675 for educational purposes and $37,710 for building purposes, making a total of $152,385. The amount of the budget for the last year was $155,030.

—The school-tax levy of Decatur, Ill., for the year 1928 amounts to $630,000, which is $69,384 larger than the levy for last year. The amount required for building purposes is $210,000.

—Ironwood, Mich. The school districts of the state will receive $15,437,887 from the primary school fund this year, according to State Supt. W. H. Pearce. This is at the rate of $12.85 per child, which is 40 cents lower than that for 1926.

—Newark, N. J. The board of education has adopted a construction budget of $1,466,635 for the year. The budget will provide $865,000 for new buildings, $300,000 for extra grounds, $91,800 for improvements to grounds, $131,000 for alterations, and $78,835 for equipment in new buildings. The budget as adopted has been considerably reduced. A large number of items have been eliminated including a gymnasium for a high school, and addition to a school, and funds for a school site.

—Portsmouth, Ohio. The school board has adopted a budget of $516,036 for the year 1928, which is $46,236 over that of 1927. The largest amount, $341,010, is for the general fund.

—Charlotte, N. C. The school board has adopted a program of retrenchment to meet an extension of the school system and a reduction of operating income. The board is faced with the necessity of employing additional teachers and extending the facilities of the schools after January 1, when the city limits are extended.

—The school board of Northville, Mich., has reduced the school taxes by $8,000 and has saved enough money to build an addition to the school.

—An investigation of municipal school finances in New York State has been proposed by Senator S. C. Mastick, chairman of the joint legislative committee on taxation and retrenchment. The investigation follows the criticism of the state education department for exceeding its authority in forcing its will upon the local boards and threatening to withhold state funds from recalcitrant localities. It is believed that one of the important things to be considered will be the use of authority by the state commissioner of education.

—Norwood, Ohio. The school budget for 1928 calls for an estimated amount of $424,255, which is approximately $16,575 in excess of the budget for last year. The increase is due to the increases in teachers' salaries which will become effective in September.

—Logan City, Utah. The tax levy has been increased three-tenths of one mill over last year's levy. The district levied twelve mills for general maintenance, buildings and improvements, and two mills for interest and sinking-fund purposes.

—The estimated expenditures for the city schools of Springfield, Mo., for the next year amounted to $679,965.

—Mansfield, Ohio. School Clerk J. H. Bristor has estimated that the schools will require $210,306 to carry them through to January, 1928. The amount for teachers' salaries will reach $151,800.

—Lincoln, Ill. The budget for 1928 has been fixed at $93,000, as compared with $94,295 for last year. An appropriation of $2,000 for new buildings and alterations was made as compared with nearly $4,000 last year.

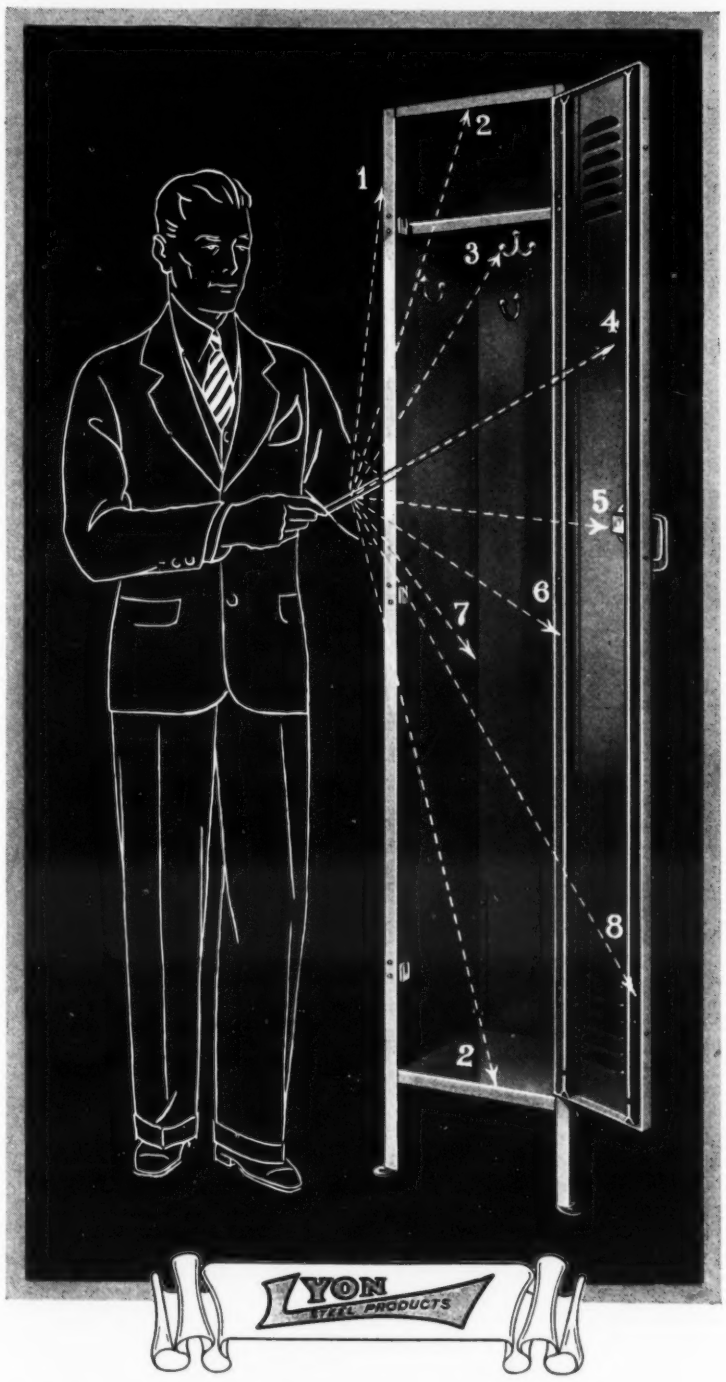
—The school board of South Bend. Ind., has reported a reduction in school expenditures for the last year amounting to $403,863. The school year ended with a working balance of $776,460 in the school treasury. The amount expended for teachers' salaries was $55,074 more than last year. A reduction of $110,272 was made in building expenditures during the past year over the year 1925-26 when $416,132 was expended on new buildings.

(Continued on Page 102)



HIGH SCHOOL GROUP, HAMTRAMCK, MICH.

In the *minor details* of *construction*, too, is *additional evidence* of LYON *Locker superiority*



A quick examination clearly reveals the major superiorities of Lyon Steel Lockers—the greater strength of the welded steel frame, the exclusive reinforced construction of the door that insures utmost rigidity, the full loop hinges, the double thick corners, the positive and quiet operation of the three-point locking mechanism, the durable baked enamel finish.

Those features, developed to the degree they are in Lyon Steel Lockers, are essential but to Lyon they are not all-sufficient. In the minor details is evidence of that characteristic thoroughness most responsible for Lyon leadership.

1 The special olive green finish reflects, instead of absorbs, the light. It does not show dirt or fingerprints. **2** The top and bottom of a Lyon Locker are formed to fit into, and rest upon, the angle cross members—the strongest construction possible. **3** Ball point hooks are galvanized to protect against rust. **4** The door of one locker cannot be flung back against the adjacent locker to injure a person or mar the finish of the locker. **5** To open the door a light pressure of the finger releases the locking mechanism. **6** There are no sharp edges on Lyon Lockers to tear the hands or clothing of students. **7** The sides and back are flanged—giving a double thickness of steel at all corners. **8** With the slightest push the door closes and the locking bar drops automatically and quietly into place, engaging at three points with the frame.

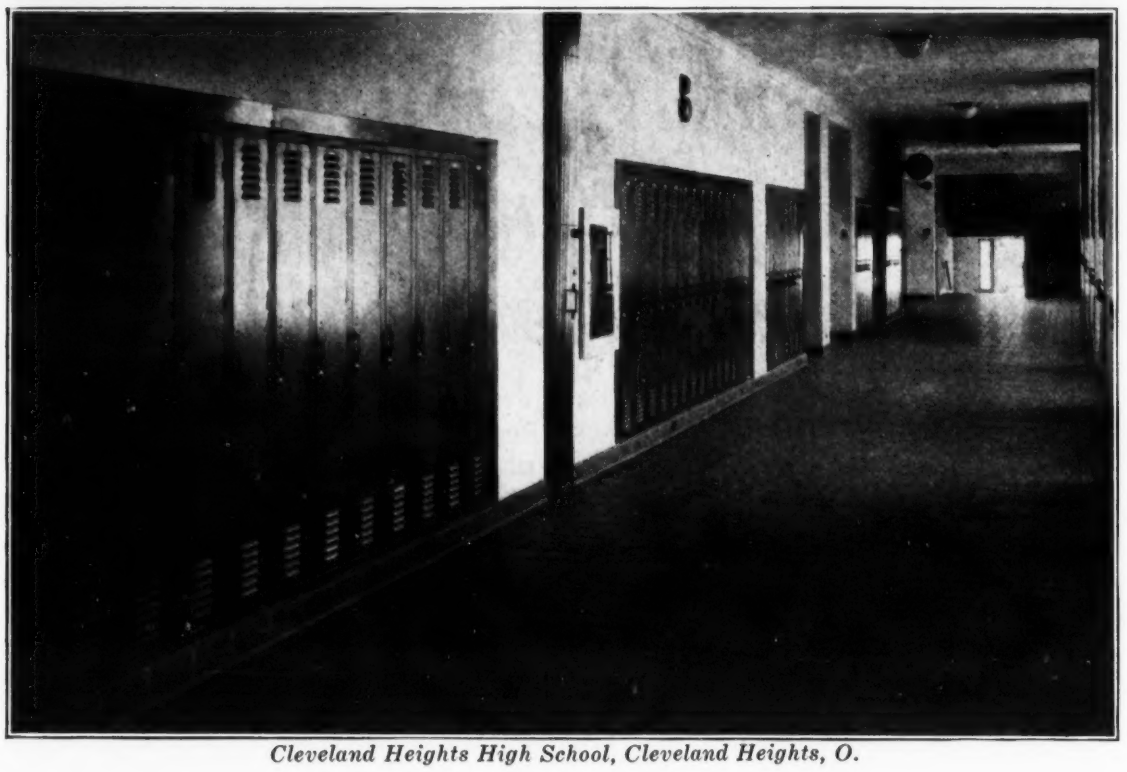
From the basic frame construction to the most minute refinement nothing has been overlooked that will give to the school world a steel locker of long-lasting satisfaction and negligible upkeep expense. Write us about your locker requirements. Let Lyon Engineers help you and your architects plan your locker installations.

LYON STEEL LOCKERS

LYON METALLIC MANUFACTURING COMPANY, *Aurora, Illinois*

District Offices and Representatives in all Principal Cities

BOSTON 161 Devonshire St.
CLEVELAND 815 Superior Ave., East
PITTSBURGH 437 Smithfield St.
ROCHESTER 61 South Avenue
PHILADELPHIA 121 N. Broad St.
LOS ANGELES 337 S. Anderson St.
CHICAGO 230 E. Ohio St.
DETROIT 1906 Penobscot Bldg.
NEW YORK 342 Madison Ave.
SAN FRANCISCO 906 Hobart Bldg.
PORTLAND, ORE. Spalding Bldg.



Cleveland Heights High School, Cleveland Heights, O.

All-Steel-Equip Company

Meet Your School's Growing Need This Fall—

INSTALL A-S-E LOCKERS

WITH increased fall enrollments, the problem of "locker space" again confronts school boards. Leading educational institutions throughout the country are meeting this problem right now and solving it with A-S-E Steel Lockers. Whatever the style needed—the one best fitted to your needs (the one shown here from the Cleveland Heights School at Cleveland Heights, O., demonstrates the recessed type of locker) can be planned. You will find A-S-E Lockers insure the greatest service from the standpoint of moderate cost, low upkeep, good appearance, and fine construction.

All-Steel-Equip Company

200 JOHN STREET — Main Office and Factory — AURORA, ILL.

District Offices and Warehouses

NEW YORK—423 W. 39th St.
PHILADELPHIA—134 N. 4th St.
CHICAGO—35 S. Desplaines St.
CLEVELAND—328 W. Superior St.
KANSAS CITY—403 Hall Bldg.
LOS ANGELES—800 N. Spring St.
MILWAUKEE—141 E. Wisconsin Ave.
DETROIT—231 Iron St.
TOLEDO—1825 Vermont Ave.

Our engineering department will give you free service in helping you plan additional locker space—or in laying out your locker needs in a new building. We have a representative located near you who can supply prompt information.

For further details of our Locker Service, write for catalog C-25.

(Continued from Page 100)

—Fort Worth, Texas. The school board has discontinued the joint participation with Tarrant county in the employment of a probation officer. Under the new arrangement, the board will employ a probation officer for five months of the year at a stipulated salary. If the former arrangement were continued the board would be required to employ the officer on a twelve months' basis at a salary of $87.50 per month.

—The school board of Wilmington, Delaware, has approved the June salary item of $187 of Mr. E. C. Witham, director of research in the public schools. The salary item had been withheld after the city auditor had refused to approve the salary list on the ground that Mr. Witham was employed at teaching in the summer school of the university.

—The board of education of Muskegon, Mich., has renewed $69,500 worth of insurance with three companies who prepared the original policies.

—The board of education of Bay City, Mich., has purchased $23,000 worth of city improvement bonds at 4½ per cent, payable semi-annually at a premium of $157.50. The bonds are dated August 1, 1927 and will mature as follows: $18,000 in three years and $5,000 in five years.

—A group of taxpayers of School District No. 1, Chikaming township, Mich., have asked a court injunction to restrain the school board from erecting a school at Lakeside. The taxpayers seek to break the contract because the cost includes only the construction work and the cost of the other items of equipment will raise the total cost to more than the $30,000 bonded for the purpose.

—Erie, Pa. A school police force has been inaugurated with the appointment of the first officer who will patrol the school buildings at night. The action became necessary because of numerous acts of rowdyism and vandalism on the school grounds.

—Cleveland, Ohio. The East Cleveland school board has made a radical change in cleaning five of the seven school buildings by adopting the contract system. A contract has been awarded to the Aetna Window Cleaning Company to keep the school buildings clean summer and winter for $18,122. The helpers formerly employed for this work will be displaced by women hired by the cleaning company. The new system will apply to five schools, while two schools will continue under the old method.

—The school board of Cleveland, Ohio, has assigned to the municipal research bureau the task of devising a pension plan for its 150 school-building custodians. Mr. F. W. Steffen, a member of the board has proposed a plan calling for a contribution of two per cent of the salary of the custodians. This would amount to $7,000 and the board would be required to contribute $20,000. The pension fund would be handled by a board of three, two of whose members would be appointed by the custodians.

—The school board of Coeur d'Alene, Idaho, has awarded contracts to the Merchants' Transfer and the Coeur d'Alene Mill Company for supplying coal at $8 per ton.

—Pittsburgh, Pa. Declaring that only a third of the taxes collected through the city treasurer's office are for the schools, the board of education has held up a request that the schools bear half of the cost of taxation. A survey will be made of the method of collecting taxes in Philadelphia.

—The school board of Indianapolis, Ind., has awarded contracts for the winter coal supply to the Indianapolis Coal Company and the Peoples Coal and Cement Company. The first company will furnish 13,000 tons of fifth vein Sullivan county coal at $3.58 a ton delivered, and 10,000 tons of fifth vein Indiana coal at $4.48 a ton. The Peoples Coal and Cement Company will furnish 4,000 tons of Houston-Thacker, West Virginia, coal at $5.57 a ton. These firms received the contracts because they were the only ones which could promise delivery of the coal.

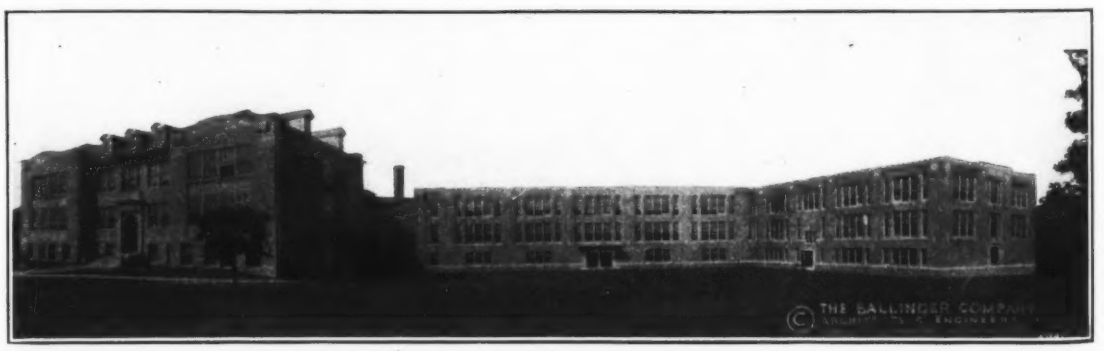
—The Wisconsin state assembly has passed a bill providing for the merging of all educational activities of the state in a single elective board of eleven members. The bill will go to the senate for final approval.

Under the bill, the present separate boards of regents for the university, normal schools, vocational schools, and mining schools will be eliminated and a single board of ten members will be elected next April for terms varying from two to six years. The members of the board will devote sixty days each year to the duties of their positions and will receive a salary of $20 a day.

Under the new system, subsidiary boards will take over the management of the different institutions and the central board will have charge of all the finances of the schools, the making of the budgets, the working out of educational policies, and the preparation of building programs. The administrative boards will have charge of the details of carrying out the policies adopted.

—The school board of Flint, Mich., plans the reorganization of the school-board committee system with a view of decreasing the number of committees and increasing the general efficiency of the board's work. It is suggested that the number of committees be reduced from seven to three, thus

(Concluded on Page 104)



THE NEW BROAD STREET SCHOOL, WOODBURY, N. J.

all ears



EAGER students, all ears, lean forward listening intently to the music that comes to them through the Western Electric Public Address System. This time it may be music — a school concert perhaps. Another time, a speech or an announcement.

Every gathering—indoors or out—is all ears for the Public Address System. For calisthenics commands, fire drill instructions, or lessons can be sent into any room, or every room. The educational uses and possibilities opened up by this System are truly unlimited.

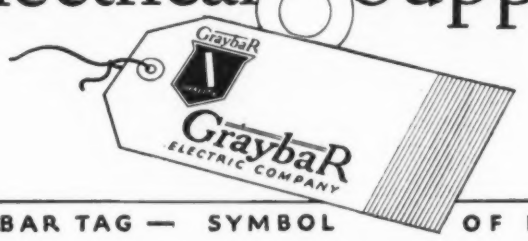
Call in a specialist from the nearby Graybar distributing house, and have him explain the advantages in detail.

Offices in 61 Principal Cities
Executive Offices, Graybar Bldg., Lexington Ave. and 43rd St., N. Y.

GraybaR

Successor to Western Electric Supply Dept.

Electrical Supplies



THE GRAYBAR TAG — SYMBOL OF DISTRIBUTION

PROFESSIONAL SCHOOL SERVICE DIRECTORY

LESLIE E. WHITE
LANDSCAPE ARCHITECT
Playground Engineering and the Landscape treatment of Institutions and School Grounds.
Specializing in the development of school grounds in the Gulf States.
Lafayette, Louisiana

CHARLES FOSTER
Member A. S. M. E.—A. S. H. & V. E.
CONSULTING ENGINEER
Heating, Ventilating, Plumbing and Lighting for Schools.
Professional Service for Architects.
512 Sellwood Bldg., Duluth, Minn.

Established 1898
JOHN NUVEEN & CO.
Municipal, County & School Bonds
We have assisted in the financing of schools in every part of the country during the last 25 years. Information and advice gladly furnished without obligation.
First National Bank Bldg. CHICAGO

SCHOOL FINANCING
For the past fifteen years we have specialized in the purchase of School Bonds.
We furnish blank bonds, prepare proceedings and attend to all legal details relating to proposed bond issues.
If you contemplate New School Financing Write us Today
THE HANCHETT BOND CO.
9 So. LaSalle St. Chicago, Ill.

THE GEORGE P. LITTLE COMPANY
1227 Prospect Avenue Cleveland
Free Press Building Detroit
CONSULTANTS ON ACOUSTICAL PROBLEMS

POWER PLANTS
HEATING & VENTILATION
ELECTRICAL & SANITARY WORK
SPRAGUE & SLOCUM
50 East 41st Street, New York City
25 Years Successful Practice in the Art of Ventilation

A. M. ALLEN & COMPANY
Architects & Engineers
7016 Euclid Ave. Cleveland, Ohio
Telephone: Penna 3140

ALFRED KELLOGG
Consultant to School Departments
Pertaining to Central Plants, Heating and Ventilation, Illumination and Sanitation. Plans when desired.
89 Franklin Street, Boston Massachusetts.

Mechanical and Electrical Equipment of Buildings
CHARLES A. MANN
CONSULTING ENGINEER
32 W. RANDOLPH ST. CHICAGO

(Concluded from Page 102)

making it unnecessary for each member to serve on three committees.

—The school board of Lafayette, Ind., has voted to rescind the contract which it entered into with Supt. A. E. Highley. The board in its action enumerated a number of charges against the superintendent and asserted that the welfare of the schools and the good feeling among the school patrons could not be promoted so long as Highley is connected with the schools.

—The school board of Woonsocket, R. I., has placed insurance for the new junior high school with nine insurance agents at a total cost of $160,000.

—Rockford, Ill. With one member dissenting, the school board recently voted to take no action on the petition of the local ministerial association that dancing be discontinued in the schools.

—Two bills have been introduced in the Georgia legislature, one providing for the city-manager plan in Augusta, and one reducing the membership of the board of education in Richmond county.

—The school board of Dodgeville, Wis., at a recent meeting defeated a proposition to increase the membership of the board from three to seven.

—The board of education of Minneapolis, Minn., has adopted a plan worked out by J. E. Meyers, president of the board, which divides the business activities among six members of the board and permits of a closer check on school expenditures.

Under the new system of handling the school business, all activities coming before the board are grouped under six heads—finance, teaching staff, curriculum, supplies and equipment, buildings and grounds, and service. Each member is given charge of one of these branches and is expected to be familiar with all developments within that field.

The new arrangement is the result of an increase in the board's activities. By specializing the work as modern business is forced to do, it is believed the board will have a more intimate knowledge of each school activity and a closer check on school executives' work.

—Centerville, Md. The board of education of Queen Annes county has adopted a budget of $126,258, which is $36,365 less than last year.

—Delphos, Ohio. The school system is facing a forced closing next December due to a serious lack of funds. The financial situation is attributed to a reduction in school funds made by the county auditor, in which the receipts of the schools for the year were reduced $10,000 below those for 1926.

—Saginaw, Mich. The board of education will profit in the amount of $12,500 through a recent decision of the Ingham circuit court in favor of the city of Detroit, which won its case against the retention of five per cent of the primary school money for distribution among the smaller counties. The law of 1925 was declared unconstitutional and the full amount of the primary money was ordered paid to each county.

—Dubuque, Iowa. The school board has approved a budget calling for a total expenditure of $505,650 for the year 1927-28. The schoolhouse fund provides for $110,000, which is divided between $60,000 for interest on bonds and $50,000 for the sinking fund. The budget lists the expenditures under seven headings and represents the first complete itemized statement of expenditures ever adopted by the board.

—The school board of Grand Forks, N. Dak., has asked for $250,000 for the operation of the schools next year. Teachers' salaries constituted the largest item in the budget, which was set at $140,000, while an appropriation of $20,000 is made for the building, alteration and repair of school buildings.

—The school board of Manatee, Florida, has adopted a budget of $176,052 for the next school year. The full ten-mill levy allowed by law will be required under the budget, with aid from various other sources.

—Columbus, Ohio. The school board has adopted a tentative budget of $6,067,913 for the school year 1927-28. The board anticipates a deficit of $21,786 under the new law.

—Mr. J. L. Coath, president of the Chicago board of education, announces that the salaries of school teachers may be reduced twenty per cent, starting with September. Lack of sufficient funds has compelled either the closing of the schools, or the reduction of salaries. The estimated deficit in school funds is $4,500,000 and the proposed reduction in salaries will approximate this amount. The crisis is attributed by Mr. Coath to the failure of a bill in the legislature which would have permitted the transfer of forty per cent of the school-building fund to the educational fund.

—Springfield, Mo. The total expenditures for the public schools for the school year ending July 1, 1927, were $15,314 less than for the preceding year, according to the annual financial report of the board of education. A cash balance of $63,552 remains in the treasury, which is attributed to the various economies practiced and to the fact that few large building repairs were made.

—Two judgments have been rendered in the common pleas court against the county board of education and the board of education of Washington township, Ohio, for the transportation of pupils to high school. One judgment was for $142 and the other $243.

—Detroit, Mich. The board of education has placed its present office building on sale in the hope that the proceeds will be sufficient to erect a new office building on a downtown site. The budget contains no appropriation for the building but it is expected that the building can be erected if the cost does not exceed the sum derived from the sale of the old building.

—Suit for the recovery of $5,690 has been begun in the common pleas court of Ohio by the Jeromesville rural-school district board against the board of education of the Montgomery township district. In a period of four years the defendant school board received in error money collected for school purposes which belonged to the Jeromesville district. The money was raised by taxation upon property located in the Jeromesville district.

BUILDING NEWS OF THE SCHOOLS

—Tentative plans have been made for the purchase of a site and the erection of a school at Novi, Mich., to cost $60,000.

—The General Education Board during the last year made an appropriation aggregating $24,534 to the state education departments of two states, payable in annual installments over a period of two to three years, to assist in maintaining divisions of school planning in those states.

—The rural school board of Willoughby, Ohio, has awarded contracts totaling $170,956 for new school construction and additions to present buildings. The Garfield School, now in course of construction, will be completed at a cost of $79,000.

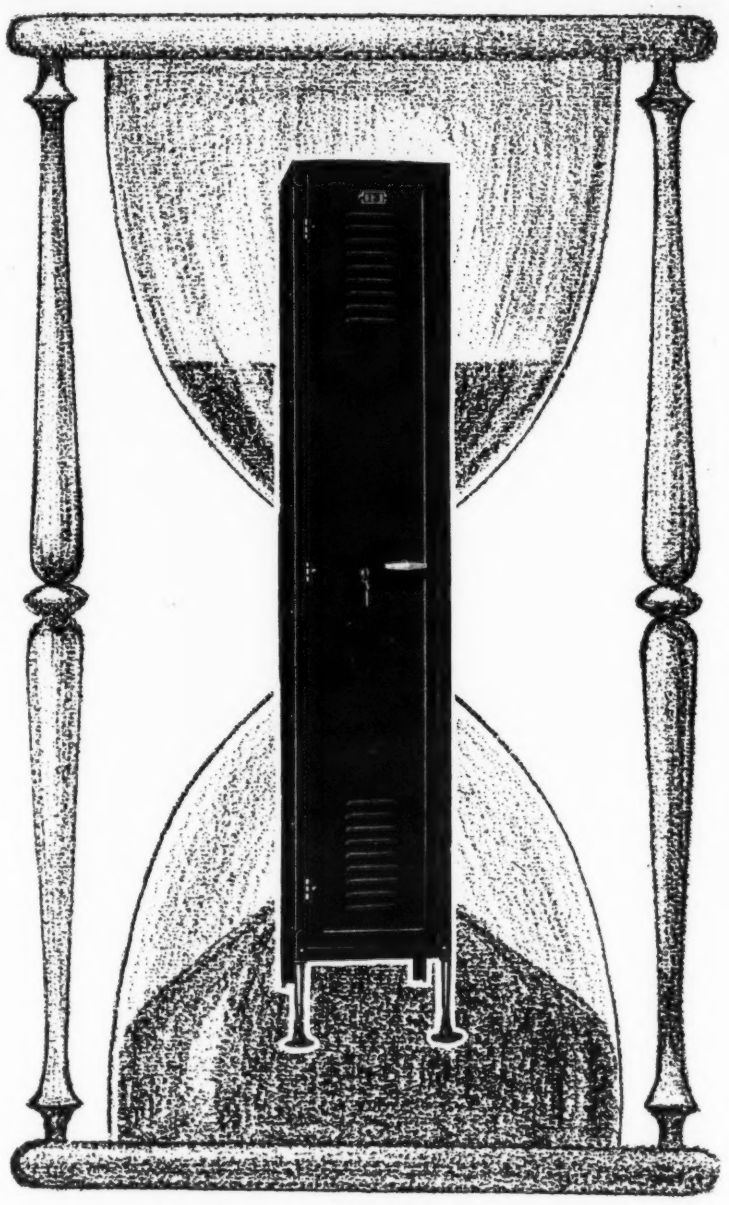
—Supt. W. J. O'Shea of New York City has compiled figures showing that congestion in the schools increased substantially during the past school year. The figures show that there were 20,264 more pupils on part-time schedules than there were a year ago. At the end of the year there were 64,105 children in part-time classes, or 4,557 more than the previous year, while the number of pupils in special sessions numbered 56,733, an increase of 15,707 during the year.

The total registration in all day schools was 984,450, or an increase of 17,607 over June, 1926. Elementary schools contributed 10,091 to the increase and high schools 5,813.

Of the 64,105 pupils on part-time, 46,345 were in the elementary schools and 17,760 were in the high schools. This is a gain during the year of 6,351 in the elementary schools, but a decrease of 1,794 in the high schools. The number of pupils on special schedule in the elementary schools increased by 3,707, to a total of 29,938.

—The board of education of Oradell Borough in New Jersey has employed Dr. George D. Strayer and Dr. N. L. Engelhardt of Teachers College, Columbia University, as educational advisers on the development of the new building program for the borough. The board of education plans to erect a new school building which shall meet the educa-

(Concluded on Page 107)



Defying Time

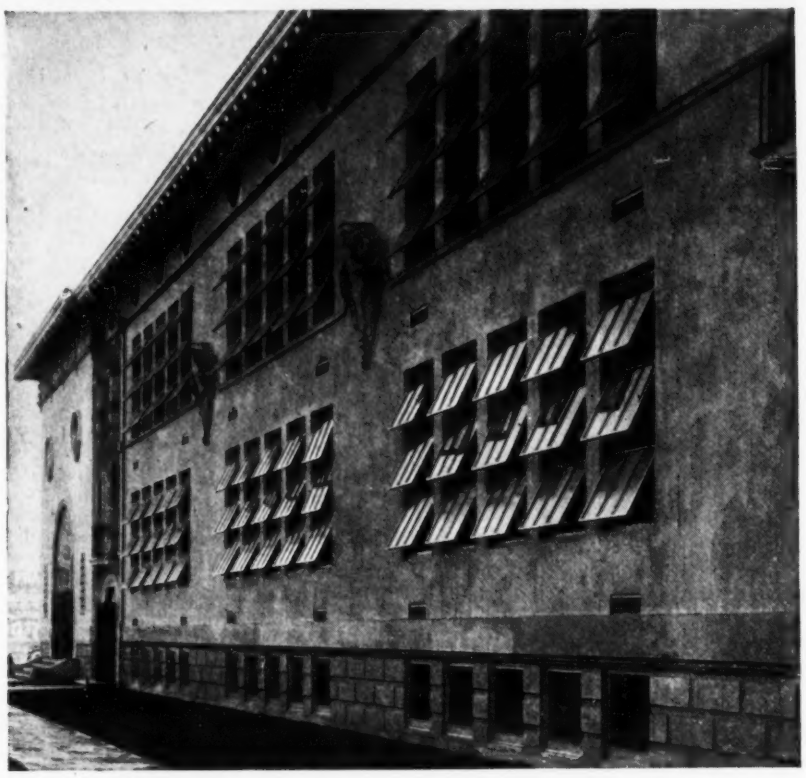
TIME flies. Years roll by. Styles may change. Conditions may vary—but *youth* remains the same—*Always* • • • Jostling, kicking, struggling, heedlessly abusive youngsters tear through crowded locker-rooms. A yank at the door. A tug on a hook. The locker door slams • • • and the room is empty. That's the sort of strain under which Medart lockers must stand up. They are built for it. They are warp-proof. Doors are double reinforced and can't sag. And they keep their clean, attractive appearance for years and years. That's why Medart lockers are "The Standard by Which All Lockers are Judged." • • • Our free engineering service is at your disposal to plan the most economical locker arrangement • • • Write today and ask for Locker Catalog.

FRED MEDART MANUFACTURING CO.
3530 DeKALB STREET • • • SAINT LOUIS, MISSOURI

Detroit • • Chicago • • Cleveland • • New York • • Pittsburgh
Philadelphia • • Kansas City • • Los Angeles • • San Francisco

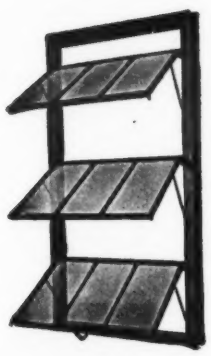
MEDART LOCKERS

• • The Standard by Which All Lockers are Judged • •



St. Mary's Parochial School, Phoenix, Ariz. Archt.: Lescher & Mahoney. Contr.: A. F. Waselewski Co. Truscon Donovan Awning Type Windows. Architectural Projected and Circle-Head Windows. Industrial Projected Windows in Basement.

Ventilation without Draught—Daylight without Glare



In many of the latest school buildings Truscon Donovan Awning Type Windows were installed and have met with immediate and enthusiastic approval. They insure a healthful abundance of fresh air and the maximum amount of daylight. They are easily operated—move the bottom sash and the upper sashes are opened or closed simultaneously. Or, by releasing a catch, the bottom sash operates independently, leaving the upper sashes in any desired position. No poles are needed—no straining or sticking.

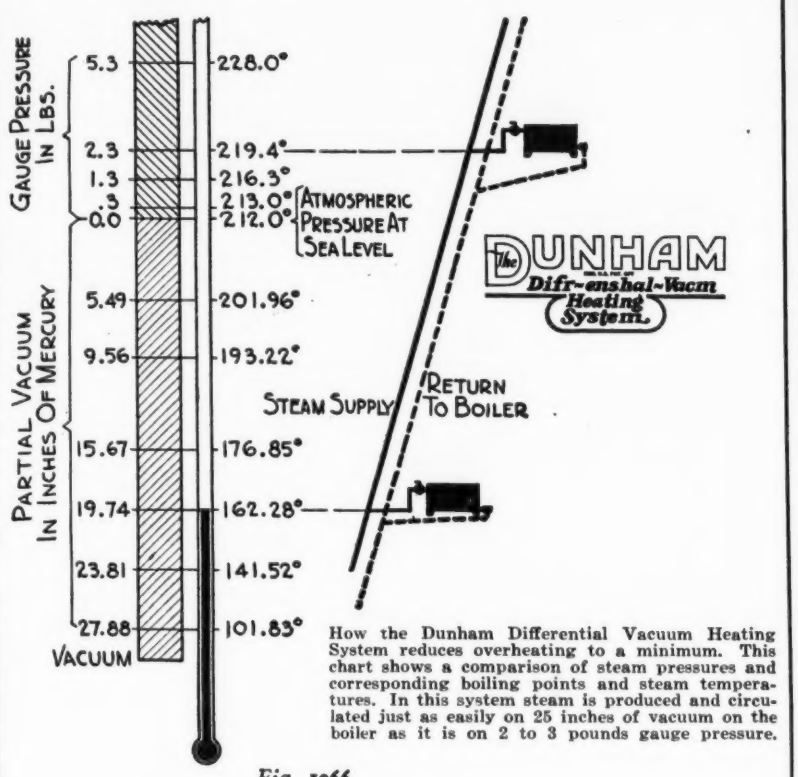
The Truscon Awning Type Window was developed primarily for use in American school buildings in accordance with the method of ventilation recommended by the New York Commission on Ventilation, headed by Dr. C. E. A. Winslow of the Yale School of Medicine. The general approval which greeted the introduction of Truscon Awning Type Windows shows that this is the ideal window for schools.

Catalog on Request.

TRUSCON STEEL COMPANY
YOUNGSTOWN, OHIO

Warehouses and Offices in all Principal Cities.

TRUSCON DONOVAN AWNING TYPE WINDOWS



How the Dunham Differential Vacuum Heating System reduces overheating to a minimum. This chart shows a comparison of steam pressures and corresponding boiling points and steam temperatures. In this system steam is produced and circulated just as easily on 25 inches of vacuum on the boiler as it is on 2 to 3 pounds gauge pressure.

Fig. 1066

DUNHAM saves fuel by eliminating overheating

To the school the fuel savings made possible by the economies of the Dunham Differential Vacuum Heating System mean a reduction in expenditures for coal or oil—a reduction in some cases as high as 40%. This is worth considering in any school, no matter how small the building may be.

This saving of fuel is accomplished through the innate adaptability of the Differential System *to function at all times* in strict conformity to outdoor weather conditions, using only enough fuel to maintain indoor temperatures at the level needed for warmth within the building, and to compensate for heat lost from the building. In mild weather, subatmospheric steam flows through the system as low as 133 degrees. In extreme weather the temperature of this steam is raised to correspond to heat losses, as stated.

To the engineer, the Dunham Differential Vacuum Heating System means less coal to shovel, with true economy accomplished at the coal pile. It means less regulation of individual room temperatures, because every room is properly and adequately warmed. It means the elimination of the serious problem of excessive window ventilation to compensate for overheated rooms—a problem for which all too often the engineer is held primarily responsible.

C. A. DUNHAM CO.,
DUNHAM BUILDING
450 East Ohio Street, Chicago.

Over seventy branch and local sales offices in the United States, Canada, and the United Kingdom bring Dunham Heating Service as close to you as your telephone. Consult your telephone directory for the address of our office in your city. An engineer will counsel with you on any project.

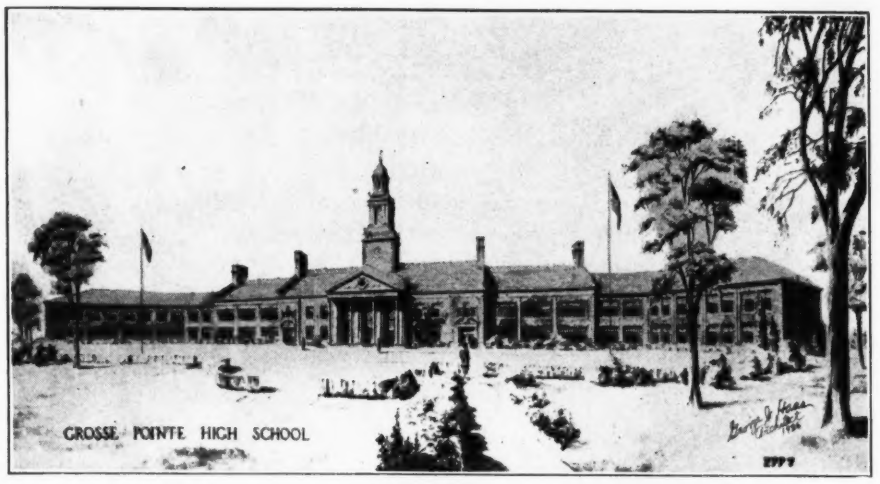
LOOK FOR THE NAME
Dunham
This nameplate identifies a genuine DUNHAM Radiator Trap



The Dunham Differential Vacuum Heating System is fully covered by patents and pending applications for patents in the United States and Canada and Foreign Countries. Any infringements will be vigorously prosecuted.

The DUNHAM REG. U.S. PAT. OFF.
Difr~enshal~Vacm Heating System.
A FIXED DIFFERENTIAL IN PRESSURE — A VARIABLE DEGREE OF VACUUM

A striking example of Georgian Colonial



GROSSE POINT HIGH SCHOOL, GROSSE POINT, MICHIGAN. (*Architect George J. Haas*) Designed in historically correct Georgian Colonial and ideally situated on a site of 27 acres, representing an expenditure of $1,500,000.

—and its appointments in keeping, of course!

In so exemplary an educational edifice the architect chose carefully interior appointments in keeping with the exterior excellence of the structure. Nothing but the best, in fountains as in other equipment—hence Halsey Taylor Drinking Fountains, so fast becoming the standard specifications in modern school buildings.

Automatic Stream Control

This exclusive Halsey Taylor feature keeps the drinking stream at uniform height and provides a freedom from contamination. Two-stream projector makes it impractical for lips to touch source of supply. Safe and practical!



HALSEY TAYLOR DRINKING FOUNTAINS

provide a degree of drinking convenience and positive sanitation not afforded by any other make or type. A complete line of wall, pedestal, recess, and cooler types.

Write for catalog.

The Halsey W. Taylor Co.
Warren, O.

(Concluded from Page 104)

tional needs of the community and yet take into account the important economies in the working out of the plans.

—A junior-high-school building will be occupied at Alma, Mich., on September 6. The building is equipped with movable tables and chairs and was erected from plans prepared by Warren Holmes-Powers Company, of Chicago and Lansing, Mich.

—Corinth, Miss. The citizens recently voted to issue bonds in the amount of $150,000 for the erection of a fifteen-room primary school for white children. An additional school is being erected for colored children, at a cost of $30,000.

—Cape May, N. J. The school board has entered upon an extensive building program which is to be completed at a cost of $110,000. The program will include a new gymnasium to cost $24,000, a school for colored children to cost $65,000, and a centralized heating plant. The work is being done by Architects Edwards and Green of Camden, N. J.

—Ferndale, Mich. A new 35-room school will be completed in February, 1928. The school is being erected from plans prepared by Hugh T. Keyes.

—The town of Walpole, Mass., has voted an appropriation of $275,000 for an addition which will triple the present accommodations of the high school. The architects are Messrs. McLaughlin and Burr of Boston.

—Shrewsbury, Mass., is completing a twelve-room elementary and junior high school, the total cost of which will reach $115,000.

—President Henry S. Willard of the Ridgewood, N. J., board of education addressed an audience of 700 citizens in behalf of new school buildings, resulting in creating a favorable sentiment.

—Comptroller Berry, in a recent statement sent to the New York City board of estimate, has declared that it appears from the records that it is not unusual for the city to pay from three to five times the assessed valuation for real estate bought for municipal purposes and particularly for public-school sites.

In support of his assertion, the comptroller named five sites selected for schools in which the final awards were many times more than the assessed valuation.

The board of education, in replying to Comptroller Berry's statement, maintains that it has no responsibility in determining or fixing the prices paid for school sites. Commissioner William J. Weber, chairman of the building-and-sites committee, stated that the board selects the sites and certifies them to the board of estimate, stating the last assessed valuation as entered by the department of taxes and assessments. A supreme-court justice is designated by the appellate division to hold hearings in which the city and the owners of property hear the evidence and the justice sets the final valuation. The decree of the court is forwarded to the board of education which then asks the board of estimate to grant funds to pay for the sites.

—Bonne Terre, Mo. The citizens have voted to erect a high school, to cost about $125,000.

IMPROVING THE SCHOOLROOM INTERIOR

"During the past 25 years, exceedingly rapid progress has been made in the United States in the betterment of schoolhouses. Hundreds of millions of dollars have been spent during this period in substituting superior consolidated schools for one-room buildings, in replacing worn-out and wretched city schools with attractive fire-resistive structures, and in providing these schoolhouses with equipment which is more hygienic, more comfortable, and better adapted to the needs of the educational program." This is the introductory paragraph in a discussion presented by N. L. Engelhardt of Columbia University, at the Dallas superintendents' meeting. He further said:

"In spite of this vast expenditure of money, thousands of school children and hundreds of school teachers still spend their school days in classrooms which are poorly lighted, provided with inadequate equipment, and which appear dreary and unattractive because of the failure to advance a proper program of maintenance. The most significant contribution which can be made today to the provision for better classrooms in the United States is in the rehabilitation of the thousands of classrooms which were built previous to 1905 when very few of the school-building standards of today had been developed.

"Many of these classrooms have an eight-to-ten per cent ratio of window area to floor area, while 20 per cent is essential if the eyesight of children is to be given full consideration. In many of these old classrooms, no artificial light of any kind is provided, or a single unprotected bulb, with its hideous glare, is suspended from the middle of the ceiling. Very little of decorative art has been applied to these classrooms to make them attractive. Blackboards cover 30 to 35 per cent of the interior wall, thus adding to the unattractiveness of the room. The color scheme in many of these old classrooms, instead of being pleasing and comforting to the youthful eye, leaves the impression with children that the classroom is not a place of happiness and joyful comradeship. These old classrooms are to be found in many school systems; in fact, they far outnumber the newer type of classroom in many cases.

"It is desirable for parents, as well as for educational administrators, to study the contrast between the older and newer classrooms in their own school systems. The new classrooms, by contrast, are decorated according to a standard color scheme with the walls light buff or very light green, the ceiling white or extremely light cream, the dado slightly darker than the walls, and the woodwork, furniture, and shades harmonizing in tone with the rest of the room. A 20 per cent ratio between window area and floor area is provided. Shades which may be carefully adjusted against lighting conditions have been installed. Blackboard space has been reduced to a minimum, while cork bulletin space has been provided at various points in the room so that the drawings and paintings which the children themselves have made may be adequately displayed. The room is also provided with six to nine electric outlets, and the eyes of children are safeguarded by the use of the same kind of fixtures which their fathers use in the best-equipped business offices.

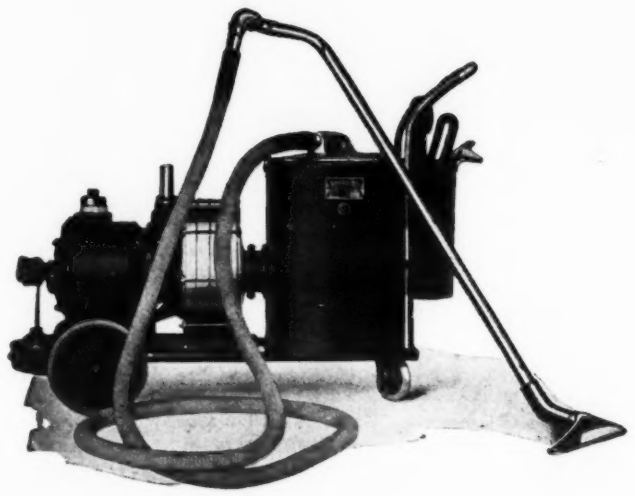
"In the older type of classroom, the stationary desks fastened to the floor make one still conscious of a type of educational program which thought in terms of rigid mental discipline but disregarded the development of the child for the social world in which he would be expected to live. The modern classroom has replaced these uncomfortable fixed seats with movable seats of varying sizes to meet the needs of children of various heights. The movable seat has encouraged the clustering of children in social groups, the teaching of children according to special needs, and has placed upon the child a responsibility for self-control which was denied him when he sat in the seat arranged according to military precision. More and more will the classroom be given the appearance of a laboratory in which a group of people are busily engaged in a work which

"CLEANLINESS KNOWS NO SEASON"

Save 40% and have cleaner, more healthful schools

"INVINCIBLE" Portable Vacuum Cleaners meet every school requirement. They have tremendous cleaning power, are easily handled, and are sturdily constructed to give a life time of satisfactory service.

"INVINCIBLE" Portable Vacuum Cleaners require no intricate piping and no long, heavy lengths of hose. Their maintenance and operating cost is extremely low.



"INVINCIBLE" Portable Vacuum Cleaners clean floors of any kind, blackboards, chalk troughs, erasers, walls, ceilings, window ledges and in fact every nook and corner of the entire building.

Write us today for complete information and report on cleaning schools.



INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO, U. S. A.

is of utmost interest to them. Tables and chairs have begun to make their way into many classrooms, giving a flexibility even beyond that of the movable chair-desk. Practically all modern tendencies in education have been toward the development of classrooms to the end that they may become homelike and attractive, adapted to meet the individual needs of children and of special groups within a class, and arranged so that the utmost flexibility in the curriculum and in methods of teaching can be followed.

"An important observation growing out of a study of the classrooms in many school systems in the United States is that our school administrators need to develop better programs of maintenance and more efficient programs for the cleaning of classrooms. A program of maintenance which provides that every classroom in the school system can be redecorated every five years is highly desirable. It is essential that the program for operation should provide that classroom walls be cleaned frequently, that windows be washed as the need arises, that the dust and dirt be removed from electric-light fixtures, that a live bulb be provided for every electric socket in the classroom, that window shades be repaired and maintained at a high degree of adequacy, and that classroom pictures and ornaments be cleaned and replaced at stated intervals.

"It is suggested that the city superintendent of schools and the members of his staff should not only continue to stress the importance of providing classrooms in new construction which meet modern standards, but that today a far greater emphasis than ever before should be placed upon the program of maintenance and the program of janitorial service to the end that classrooms even in the older buildings may be made attractive for the children of our cities."

RURAL SCHOOLS AND THE ECONOMIC SITUATION

Mrs. Katherine M. Cook, of the division of rural education in the U. S. Bureau of Education, in a recent statement, points out that the rural schools of the country have profited by as well as suffered from the general economic depression affecting agriculture during 1925 and 1926.

Mrs. Cook shows that building programs have been delayed in some sections, that expenditures have been curtailed to cover only accepted necessaries, that supervision has been narrowed, and that in some communities, standards have been lowered. The economic situation has resulted in more determined efforts to obtain efficient rural schools through more generous support. Mrs. Cook believes that the concentration of attention on the general educational welfare of farming communities will continue, that it will have a permanent influence on educational conditions.

Conditions in Certain States

Mrs. Cook concludes her statement with an interesting summary of specific conditions in some of the states. She writes:

"Among the comments on the relationship between the economic situation and general school progress which have been made by the chief state school officers of these states, the following, selected as representative of different sections of the country, are also reasonably typical:

"*Connecticut*—Progress has been very much slowed down by the present economy wave, but has not stopped. No retrogression is in evidence. The tobacco situation has hindered developments in the tobacco-growing districts.

"*Louisiana*—The economic conditions in the rural sections of the state are not very promising. The sugar crop has been a failure for the past two years. The cotton crop has been good, but the present low price has brought much hardship to the cotton farmers of the state.

"*Maine*—The fact that the farmer has been going through a period of depression has developed a psychology which makes it difficult to find ways and means for making the rural schools commensurate with the needs of the people. In one county in which a crop failure occurred last year an effort was made to maintain schools at their usual efficiency, but it became necessary in some instances to reduce salaries, shorten the length of the term, and postpone improvement. This year the country is prosperous and every effort is being made to recover the lost ground and to go ahead. The rural school situation is vitally tied up with the economic conditions.

Montana Needs State Aid

"*Montana*—While economic conditions in general in this state have improved, a large number of districts in rural sections of the state had exceedingly high levies, and many districts have not opened school at all. Children have been cared for in other districts, or in some instances have been left without any school whatever. Conditions cannot be remedied until the state assumes a larger share of school support Districts are helpless to carry so heavy a load as has been required.

"*New York*—Farmers have been paying disproportionately high taxes, and this heavy burden of taxation has retarded school progress.

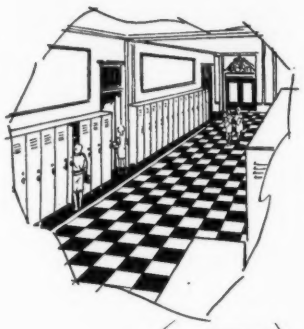
"*North Carolina*—The low price of tobacco and the disruption of the tobacco cooperative association, together with a severe drought in 1925, have slowed up school progress in some parts of the state. The slump in the cotton-mill industry affected the income tax and limited state support. On the whole, however, the economic situation seemed fairly good until the slump in the price of cotton in 1926. There is no way to tell how far-reaching this will be.

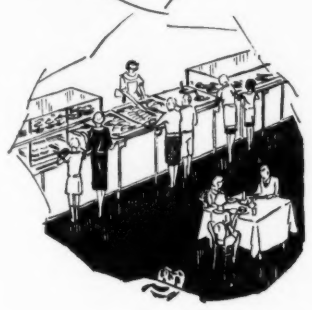
"*South Carolina*—Agricultural states have had a hard time financially for the past few years, but South Carolina seems to have largely solved the problem of financing her public schools through indirect taxation.

"*Wyoming*—Economic conditions in most of the rural communities of this state have been bad during the past biennium. There is some indication of improvement at the present time. This, of course, has affected rural school improvement. Fortunately the rural schools have been able to continue and improve without much local taxation, so that the schools in this state have not suffered as severely as those in surrounding states where economic conditions were similar but state support less adequate.

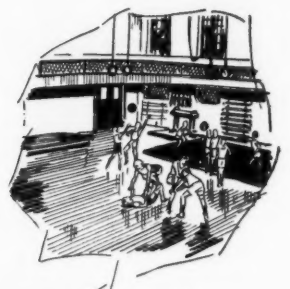
Improvement Coming

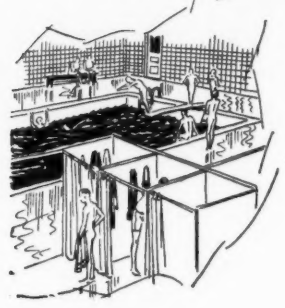
"But the economic situation had led also to fruitful and determined efforts to secure more generous school support and more efficient schools for rural children—movements which promise effective and permanent results. Two important factors are more clearly and widely recognized than ever. Local support as the sole dependence for rural schools is inconstant, inadequate, and inequitable; and rural schools frequently, from causes inherent in rural conditions, cost more rather than less than urban schools, if equally efficient. The ultimate result has been a reexamination of the situation and renewed efforts for improvement centering largely around two large aspects of rural education—scientific and equitable methods of support, and standards of achievement, the latter concentrating chiefly on improving the quality of instruction."











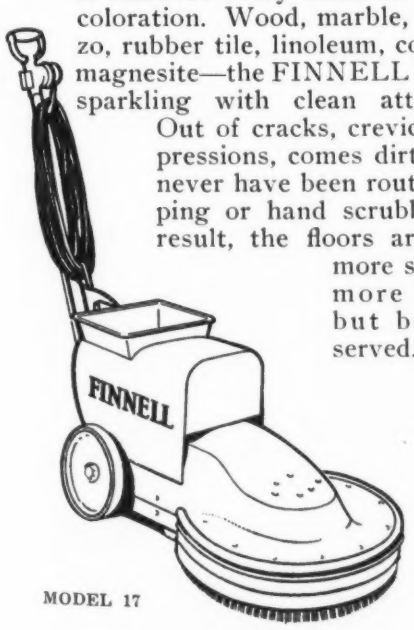
Safe Hygiene Demands this Cleanliness

A CLASSROOM, a cafeteria, a corridor, a gymnasium or swimming pool where floors are not scrubbed thoroughly and at regular intervals is a menace to the school child's health. You, as a school official, are interested in promoting your school children's physical and mental welfare. Clean floors are necessary to both.

Investigation will reveal to you that antiquated mopping, pole brush and hand scrubbing cannot give the children the floor cleanliness they should have. Even oiled floors require more thorough handling to remove insanitary accumulations.

Ten square feet of floor anywhere in your school, scrubbed with a FINNELL Electric Floor Machine, will disclose a greater cleanliness than you ever believed possible. And it costs *less* to have safe, FINNELL-cleaned floors, than to go on improvising with antiquated, unhygenic, makeshift methods.

THE FINNELL Electric Floor Machine can be used to scrub any type of floor. With powerful brushes, revolving over 200 times per minute, it removes every trace of dirt or discoloration. Wood, marble, tile, terrazzo, rubber tile, linoleum, cork, mosaic, magnesite—the FINNELL leaves them sparkling with clean attractiveness. Out of cracks, crevices, and depressions, comes dirt that could never have been routed by mopping or hand scrubbing. As a result, the floors are not only more sanitary and more beautiful, but better preserved.



MODEL 17

Waxes, Polishes Too

By instant adjustment the FINNELL applies wax and polishes wood or linoleum floors to lustrous beauty. They are never left sticky or slippery. Floors cared for in this way have a much longer life of utility and attractiveness.

The FINNELL works with incredible ease and speed. The model shown below (No. 17) covers ten times as much floor area per hour as the strongest man. It has been known to do the job of as many as seven workers. It cleans easily under stationary desks—under tables, chairs, teachers' desks, etc.

Saves Cost Quickly

The FINNELL soon saves enough in time and labor to cover its original cost. After this, it becomes a low-upkeep investment that has enabled hundreds of schools to reduce their floor maintenance budgets over half! There are eight models, to suit every school need. Several can be easily transported by automobile and *used for a group of schools,* thus reducing immediate equipment investment.

FINNELL

ELECTRIC FLOOR MACHINE

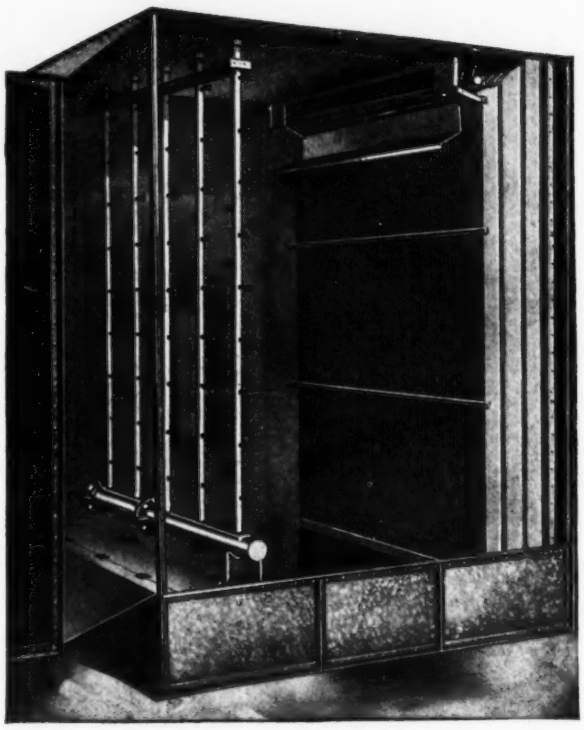
It waxes · It polishes · It scrubs



Send for Details and Estimate

Both are free. You will find the literature on safe floor hygiene and its economical maintenance worth while and informative. Write for it today. If you wish an estimate of equipment needed and possible saving, enclose a description of floors, area, present cleaning methods. Address FINNELL SYSTEM, INC., 69 East St., Elkhart, Ind. (Factories Elkhart, Ind., and Ottawa, Can. District offices in principal cities of U. S. A.)

Why tolerate DIRT because it's in the AIR?



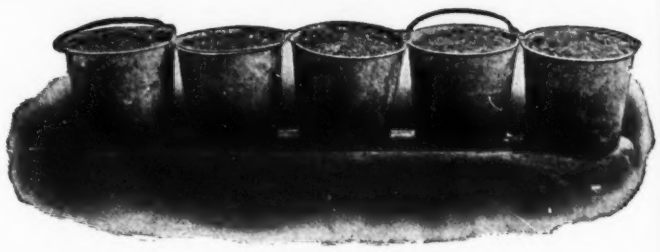
Interior of Carrier Air Washer showing spray nozzles and eliminator plates in place. Here dust, filth, and bacteria are washed out of the air.

You'd fire a janitor who'd leave all this dirt around in halls and classrooms — and yet dirt on the floor is infinitely less harmful and revolting than dirt in the air breathed by delicate lungs.

The health of children entrusted to your care demands the protection that Buffalo-Carrier equipment alone can give. Pure WASHED air correctly humidified, promotes health, saves heat, and reduces depreciation on furnishings, books, maps, etc.

5 pails of DIRT in a single week!

5 pails of dirt removed from the air of a prominent school building by a Carrier Air Washer during a single week's run — and this is only part of it! Probably as much more had been carried off in the overflow.



Buffalo Forge Company

186 Mortimer St. Buffalo, N. Y.

In Canada—Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

CHICAGO CORRESPONDENCE

"Keep the Schools out of Politics."

A huge advertisement recently appeared in a Chicago newspaper with this appeal. It purported to have been financed by "public-spirited citizens who believe in this great cause." Evidently it is thought that the Chicago school situation has become serious enough to warrant an attempt to arouse the citizenry. The advertisement urges, "Make it your business to find out what is going on. Give your support to movements which have the interests of the school children at heart. Reject for public office those who touch the schools. Vigorously condemn what you believe to be wrong; commend what is right. Use the telephone, the mails and the newspapers. Your personal interest is vital to the well-being of the schools."

It is possible that members of the Chicago Public School Citizens' Commission backed the appeal. This organization, consisting of representatives of the city's leading business and civic organizations, is opposed to the appointment of the present president of the school board and apparently is fighting several of his policies. One of the committee's bulletins recently stated to the public that many statements, contrary to facts and contrary to themselves, have emanated from the office of the school-board president, and have appeared in the press. Reference was made specifically to the threat of a salary cut for teachers. Following are several definite items affecting the schools which have appeared in the press within the past month:

1. Teachers' Pay Cut?

Supt. McAndrew has vigorously recommended salary increases for the Chicago teaching force ranging from $750 to $1,500. The school board president now threatens a pay reduction because of alleged insufficient revenues to continue the schools otherwise. The Citizens' committee denounces this proposal as unwarranted.

2. Chicago Teachers Must Live Within the City Limits?

Of Chicago's 12,000 teachers, 1,406 live in suburbs. Two thousand recent graduates of the Chicago Normal College are without jobs. It has been suggested that the out-of-city teachers might be ousted and their places filled with newly graduated normal-school girls. The normal college girls would start at the minimum salary; many of the out-of-city teachers are at the maximum. The report of the secretary of the school board says that $2,249,623 could be saved at one stroke.

3. Married School Teachers May Lose Their Jobs?

With such a large surplus of teachers—2,000 unassigned graduates of the normal college—it may become necessary to supplant married teachers, according to the president of the school board. He is said to be conducting an inquiry into the efficiency of married teachers to see whether the added responsibility of married life lessens their efficiency.

Supt. McAndrew has denounced the proposition as discriminatory and impractical. "Teachers can be dismissed only after a trial and proof of misconduct, or unfitness. Is marriage a misdemeanor? Who is going to try these teachers for getting married? And how about the men teachers?"

The Chicago Federation of Men Teachers has come to the defense of married teachers, too.

4. Will Supt. McAndrew Be Ousted Before February 1?

The president of the school board said, "Supt. McAndrew will be discharged by the board of education before the first of September. The thing will be over in five minutes." Action will be based on a new interpretation of the Otis law, the school law under which the Chicago schools operate, it is alleged. The law was passed in 1917 and set up a four-year term for the superintendent of schools. Therefore, one four-year period ended in 1921 and a second period in 1925, hence the statement that Mr. McAndrew's term has expired.

During the spring mayoralty campaign, one of the newspapers opposed to William Hale Thompson stated that thirteen different Chicago high-school principals had been promised the superintendency. On July 17, a newspaper supporting Mr. Thompson, carried the names of twenty-five local school people "from whom the school board will select within a month a successor to Superintendent William McAndrew."

Citizen friends of the superintendent have organized a defense fund and have hired two of the best lawyers available, Francis X. Busch, former city corporation counsel, and Angus Roy Shannon, author of the Otis law. Mr. Shannon said, "There is no legal possibility of anyone getting Supt. McAndrew out of his present position before the expiration of his term, unless it is done either viciously, maliciously, or stupidly." It has been stated also that the object lesson of the former school-board members who ousted Mr. Chadsey, going to jail also looms as a deterrent to surreptitious action.

Meanwhile opinion differs over the McAndrew qualifications. The president of the school board calls him "the worst bunk-shooting educator in the United States." On the other hand, a member of the defense-fund committee sums up his views by saying, "Chicago would never be able to get a good man from out of town to accept an important school position if we should allow the best superintendent we have had in years to be thrown out of office before the end of his term."

One school trustee of the "oust-McAndrew" faction recently admitted, "We can't dismiss the superintendent. We haven't got the necessary number of votes, and we see no possibility of getting them in the near future."

Throughout the controversy Supt. McAndrew goes about his duties apparently unperturbed.

Two hundred well-known citizens interested in school affairs gave a testimonial luncheon for Charles H. English, recently ousted playground director, that turned out to be a carnival of denunciation of J. Lewis Coath and the new school administration.

Mr. Pond spoke, "When the time comes that people are appointed to the board of education because they have served the politicians well and when teachers turn to the unspeakable insect in the president's chair at the board of education, then the warning signal is here that decay has set in." Supt. McAndrew later referred to Mr. Pond as "one of our foremost entomologists." Among those assembled at the luncheon were such notables as Julius Rosenwald, Judge Mary Bartelme, A. Alonzo Stagg and many others. S. J. Duncan-Clark, vice-president of the city club, and editorial writer for the Chicago *Evening Post*, presided. He spoke as follows:

"I cannot but regard with dismay the utter heedlessness of the board of education for educational values and the welfare of the children. So far as I can read the signs, the schools are being run for politicians, and no man is wanted for super-

(Concluded on Page 112)

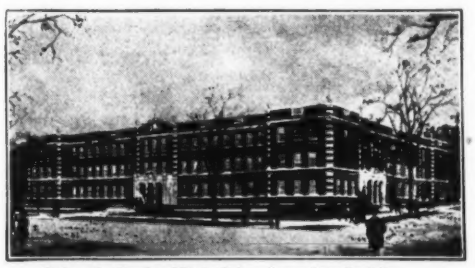
UNIVENT and Glass – *make the difference*



NEVER again need teacher and pupils be handicapped by dangerous chilly drafts . . . floating dust and smoke . . . loud, distracting noises from the outside world . . . impure, stuffy, overheated air.

Health is safeguarded — energy and mental efficiency are lifted to a new high level, by a scientific method of controlled ventilation which permits of keeping windows CLOSED. It is called Univent Ventilation.

The Univent brings in fresh outdoor air, purifies it, heats it to the correct temperature when heat is necessary, circulates it gently yet thoroughly throughout the entire room. All day an ideal atmospheric condition prevails.



*Lincoln Junior High School, *equipped with* . . .

UNIVENT (TRADE MARK)

VENTILATION

Not only school authorities, but architects, heating engineers and physicians endorse Univent as an important advance in ventilation. It is serving today in thousands of schoolrooms.

We will gladly send you our book, "Univent Ventilation." It contains valuable information on the problem of effective schoolroom ventilation, and shows why only the Univent gives Univent Ventilation. Write for your copy today.

**Lincoln Junior High School, Canton, Ohio*
Vernon-Redding and Associates of Mansfield, Ohio, Architects

Manufactured only by THE HERMAN NELSON CORPORATION, *Moline, Ill.*

Builders of Successful Heating and Ventilating Equipment for 20 Years

Sales and Service

BELFAST, ME.	SYRACUSE	PITTSBURGH	DETROIT	INDIANAPOLIS	MINNEAPOLIS	SAN FRANCISCO	SPOKANE
BOSTON	BUFFALO	ERIE	CLEVELAND	CHICAGO	ST. LOUIS	EMPORIA	PORTLAND
NEW HAVEN	PHILADELPHIA	CHARLOTTE, N.C.	COLUMBUS	DES MOINES	BIRMINGHAM	KANSAS CITY	SEATTLE
NEW YORK CITY	WASHINGTON, D.C.	GRAND RAPIDS	CINCINNATI	MILWAUKEE	ATLANTA	DENVER	VANCOUVER
UTICA	SCRANTON	SAGINAW	TOLEDO	GREEN BAY	MEMPHIS	SALT LAKE CITY	TORONTO
							WINNIPEG, MAN.

WASHABLE

···SO THEY OUTLAST IN WEAR AND BEAUTY

Tontine chosen for new Commerce Building
University of Illinois
Urbana, Ill.



DuPont Tontine exclusively was chosen for window shades of the new Commerce Building of the University of Illinois. Charles A. Platt, 101 Park Avenue, New York, and James M. White, Champaign, Ill., Architects.

College boards and architects agree that window shades must now be proof against three things: water, dirt, and handling.

Some shades offer one point, some another. Only **one** shade can give all three. That shade is Tontine.

—WATERPROOF—rain can't harm it.

—WASHABLE—all grime and finger marks easily removed with soap, hot or cold water, and a brush.

—CANNOT CRACK or "pinhole" because pyroxylin impregnated, not filled with colored chalk.

Tontine justifies its use where economy is vital, because it wears for years. It long outlasts any other shade, and cuts shade upkeep costs.

Write for samples and further information.

E. I. DU PONT DE NEMOURS & CO., Inc.
Newburgh, N. Y.
Canadian Distributor: CANADIAN FABRIKOID Limited
New Toronto, Ontario, Canada.

DU PONT TONTINE
THE WASHABLE WINDOW SHADE

DU PONT OBSERVES A CENTURY AND A QUARTER OF USEFULNESS TO THE AMERICAN PEOPLE.

(Concluded from Page 110)

intendent who puts the welfare of the schools above political interest. The demoralization of the schools in all departments has begun.

"Meanwhile a lethargic citizenship is permitting the process to continue. Why don't we hear protests from the citizens when all the lines are being laid for a revolution in the schools? This is no time for citizens to be on vacations. The men who know what they want are not on vacations."

The Chicago *Tribune* recently carried an editorial anent the Chicago school situation in which that paper says:

"Mr. J. Lewis Coath says he may take lunch with Allan Pond some noon and in the course of it seize Mr. Pond by the whiskers and pour a glass of milk down the inside of his shirt. Mr. Pond called Mr. Coath an unspeakable insect. Mr. Coath is president of the board of education. As president of the board he agrees with Mayor Thompson that Supt. McAndrew is an agent of George V or George III. * * *

"Amusement is all that is asked of public officials and nowadays Tex Guinan and her gang would make a good school board in Chicago. How's the boy! Give Big Bill a hand. What a man! When Mr. McAndrew has retired from a scene in which he is temperamentally unfitted to remain, Hold-'em Joe Powers (a flag-pole sitter) will probably succeed him. Mr. Powers is a local product, we believe, and he has the record for being up in the air and sitting in one place longest.

"What children in this city need is a good snappy education in wise-cracking. They will be equipped when one is called an unspeakable insect to reply 'So's your old man.' And while this liberal education is being acquired every one will get fun."

A few chapters in the annual report of the superintendent of schools have been released.

(1) The superintendent declared that experiments in teaching by radio have failed in his opinion. He thinks that no mechanical device can be substituted for the personal contact between teacher and pupil in the classroom.

(2) Salvage of "flunkers" was the outstanding success of the year. A report given at the N. E. A. meeting at Washington, D. C., on 1924 data revealed a failing rate as high as 35 per cent in one Chicago school. The superintendent now reports that the practice of giving "flunkers" a second opportunity by allowing them to attempt work in a higher class despite failure for the year, has brought good results.

"Reports from principals," said Supt. McAndrew, "show that of the students who failed and were allowed to try a higher grade, only three per cent had to be sent back after six weeks' probation. At the end of the year most of them had entirely overcome all difficulties in their work."

Forcing children to repeat grades was bad psychology, he said, and tended to kill interest in their work. Marking students down for disciplinary purposes has also been eliminated. "When I was a boy, I was marked down in arithmetic because I whispered," said the superintendent. "Chicago children are now graded solely on their ability to sustain themselves in their studies. Greater enthusiasm and a fresher outlook are the results."

CHICAGO REFORMS JANITOR SERVICE

The Chicago board of education on August 1, discontinued the plan of paying individual custodians, or janitors, lump sums for the care and cleaning of school buildings. Under the rules, the janitors had hired their own cleaners, etc., but under the new rules all help is employed directly by the board under civil service regulations and is paid according to a carefully planned schedule. It was expected that the new plan which was fought bitterly in the courts by the janitors' union could not be put into effect without a strike, and the board had in readiness a number of men to replace any janitors who refused to accept the new order. The plan was put into effect without more trouble than violent protests.

In discussing the situation the Chicago *Daily News* said:

"Pursuant to a recent decision by the Illinois Supreme Court, the Chicago board of education has voted unanimously to abolish the objectionable engineer-custodian system of school-building maintenance. That system is to be replaced with a complete merit system covering engineers, firemen, janitors, cleaners and others employed to maintain school property in good physical condition.

"The plan of giving school engineers authority to hire all their subordinates at any wages they saw fit to pay and permitting them to pocket the difference between the total of their maintenance expenditures and the contract sums granted them by the board was part of the wasteful old spoils system. Moreover, under that plan the school principals were subject to the whims of the engineer-custodians and were unable to enforce rules and regulations essential to the health and safety of the school children.

"The change ordered by the board of education affects nearly 2,800 employes, including the engineers themselves. All of them would receive just and considerable treatment under this merit system properly applied. Indeed the abolition of the spoils system in school buildings should cause every competent employee affected to feel more secure in his employment.

"So far as the public-school system as a whole and the welfare of the children are concerned, the change now ordered should prove markedly beneficial."

THE PROGRESSIVE SCHOOL PRINCIPAL

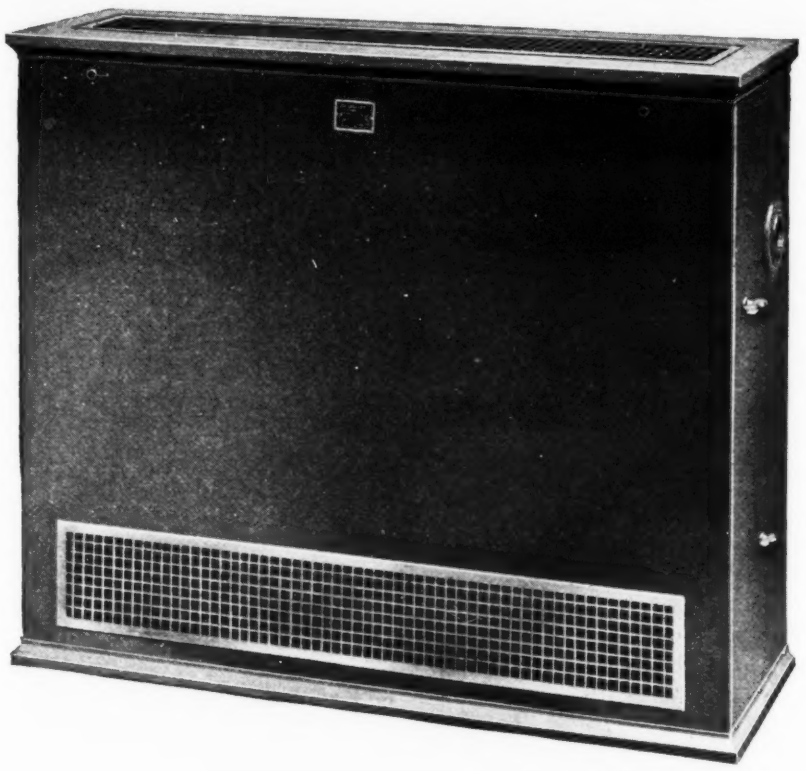
The principal who desires to lead must be mentally alert or, to put it in other terms, must be progressive. There is a certain short-lived popularity which comes to the principal who claims that he stands for the old order of things, who admits that he is a reactionary, who sometimes boasts of the fact that he is old-fashioned. Fortunately, this popularity is usually very ephemeral. Permanent and lasting leadership comes, in the final analysis, to the principal who is progressive, who adopts new policies, who sees in the future better times than there have ever been before. There is quite a difference between the unstable principal who, adopting everything new, finishes nothing, and the progressive principal who, while holding tenaciously to that which is good, is perfectly willing to try that which is new.—Paul C. Stetson, Superintendent, Dayton, Ohio.

BOARDS OF EDUCATION

—The school board of St. Joseph, Mo., has received bids for 4,000 tons of coal to be used in the schools during the coming winter. The dealers must make a price for hauling the coal from the cars to the schools.

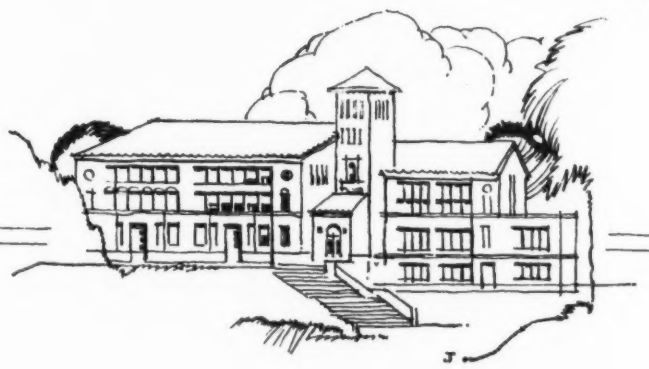
—Olin, Iowa. The local school board plans to save $2,000 next year by paying some of the rural pupils 25 cents a day to walk to a bus route, instead of sending the bus to their homes to pick them up.

Choose heating and ventilating units on a basis of quietness in operation, reliability and actual Performance Records.



UNIVERSAL
HEATING
AND
VENTILATING
UNITS

In schools like the Roland Park School, Baltimore, Md. (Edward L. Palmer, Architect; H. G. Perring, Supervising Engineer) you'll invariably find Universal Heating and Ventilating Units.



These features will assure you many years of satisfactory service and justify your selection of Universal Heating and Ventilating Units . . . And after all, these features are just what you are really interested in . . . Not only have Universal Heating and Ventilating Units proved their reliability, dependability, economy and quietness of operation, but they have consistently upheld this reputation for over 15 years . . . Today wherever Universal Heating and Ventilating Units are used, school authorities point to them as an ideal system for school-room heating and ventilating.

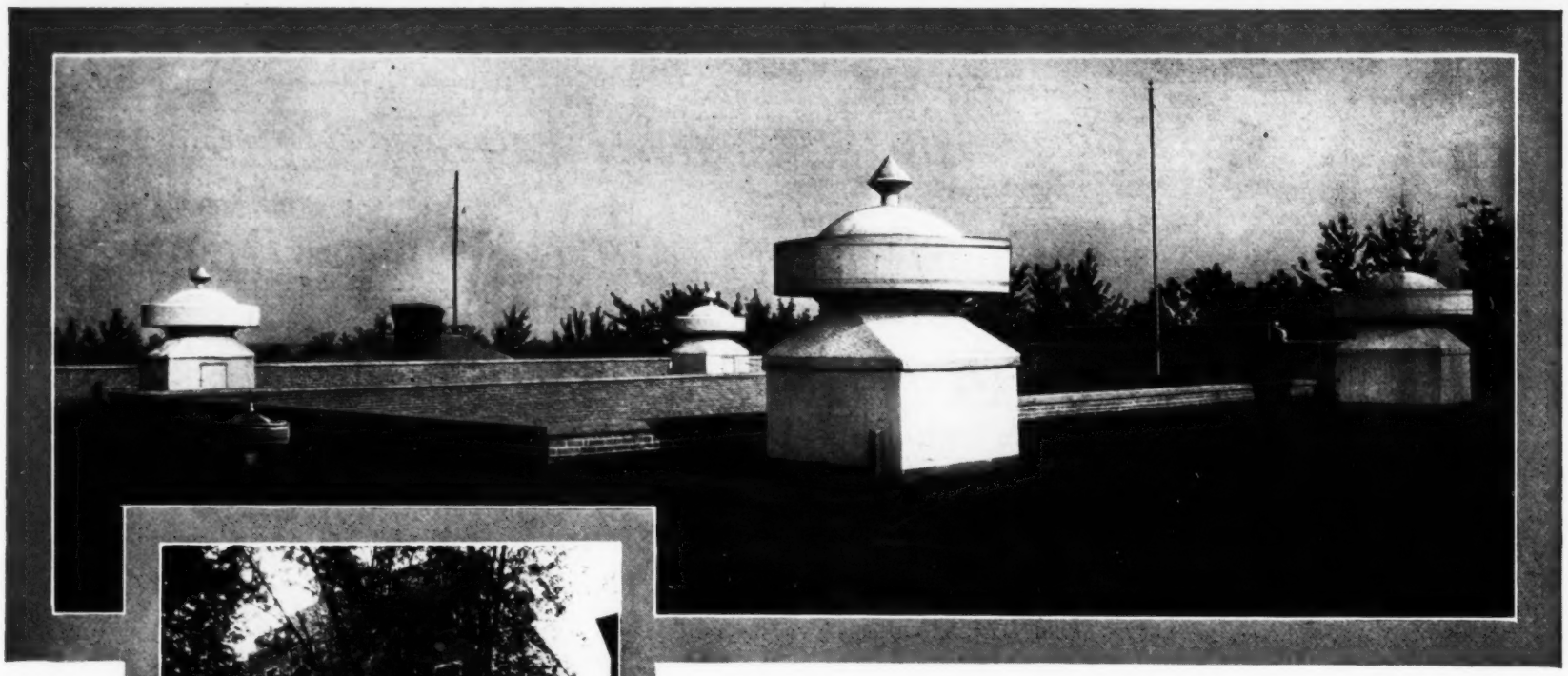
Write for illustrated 112-page book showing country-wide installations of Universal Units. It will be sent to you promptly without charge.

AMERICAN BLOWER COMPANY, DETROIT
BRANCH OFFICES IN ALL PRINCIPAL CITIES
CANADIAN SIROCCO COMPANY, LIMITED, WINDSOR, ONTARIO

(664)

American Blower

"Sirocco" VENTILATING, HEATING, AIR CONDITIONING, DRYING, MECHANICAL DRAFT
MANUFACTURERS OF ALL TYPES OF AIR HANDLING EQUIPMENT SINCE 1881



GENERAL AND ROOF VIEWS OF EUCLID SCHOOL

Schenectady, N. Y.
R. L. Bowen
Archt.

"GLOBE" Ventilators

Schools all over the United States are being so efficiently ventilated by **"Globe"** Ventilators that many architects and Building Committees have accepted **"Globes"** as standard for school ventilation. The first cost is low, they are durable, and there is no upkeep.

GLOBE VENTILATOR COMPANY

Dept. J. TROY, N. Y.

FUTURE UNIT OF SCHOOL GOVERNMENT

In the field of school administration there is a fixed tendency from the smaller to the larger unit of government. The expediency of this tendency arises from the fact that it affords greater equity in the distribution of tax funds and that the consolidated school can render a broader educational service than can the one-room schools.

The United States Bureau of Education in discussing the subject contends that the district unit in the administration of the schools is disappearing in many sections of the country. It says:

"This process is continuing. It is called the 'centralization' of authority in the state. It has reached varying degrees of progress in various states; however, the balance of power between the state and local units still remains with the local units. While the local unit must maintain schools, conforming to specifications of the state department of education, the real worth of the school it conducts is determined by local conditions, interests, and activities.

"Four more or less distinct territorial units of organization for administering rural schools are found at the present time in the United States: The district, the New England town, the township, and the county. In addition, in practically all states, incorporated cities are independent school units. There are many instances of mixed systems in which the responsibility for the school rests partly on the district and partly on the township, or on the district and the county. These mixed systems come from the transition from the old district system to the more modern township or county system.

"The small local district was the original pioneer organization, particularly in New England, and it extended westward and to the southwest. It was suited to pioneer times when a larger unit of organization was impossible. The town system originated in Massachusetts, replacing the Massachusetts district system, and soon spread throughout New England. The township school unit has been adopted by a few states, in which it is also an important unit in civil government. County organization originated in the south, largely because the county was the civil unit. It has spread westward and northward, replacing the district system in several states.

"The term 'district unit' is generally used to mean a small geographical area set apart for school purposes only and served by a single school. Occasionally, however, it contains two or more schools and in sparsely settled portions of the country is often an area larger than a township. In the old district unit the school, or schools, if there happened to be more than one, was under the full charge of a local board of trustees. This board had general charge of all school affairs, including the care of the school property, the choice of teachers, the fixing of salaries, and the establishment of the policy which governed the work of the school. The board was amenable to the annual school meeting, which elected its members, voted the taxation, and determined the length of the school year.

"The district unit has been defended as being 'democratic.' However, it is generally conceded by authorities on school administration to be ineffective and is gradually disappearing in many sections of the United States. Where it is still left local boards must conduct the school in accordance with laws and regulations of the state department of education and subject to administration and supervision, in many particulars, on the part of the county superintendent of schools. In pioneer days it was probably the only feasible plan, but with the passing of pioneer conditions and the development of modern industrial and agricultural life, a larger unit for school taxation is necessary and a larger and more centrally controlled system of organization seems desirable.

"The school unit known as the 'town' system in New England includes under one taxation unit and one board of control all schools in a civil township. The system originated in Massachusetts during the middle of the last century and has become general throughout New England, where the town is also the unit in civil government. The town unit contains all schools in the township, whether located in the thickly settled section or in the rural sections.

"New Jersey, Pennsylvania, Indiana, West Virginia, Ohio, and parts of Michigan, Iowa, and North Dakota are organized on the township-unit basis. In several of these states there is a strong movement to abandon the system in favor of a larger and more effective unit.

"The county unit is the term applied to systems in which the schools in the county (city schools usually excepted) are organized as a single system under one board of education and supported largely by county funds. There are many types of county systems in operation. Real classification is not attempted, as organizations differ in many particulars among states called 'county-unit states.'

"Ten states have centralized to the extent that the county board of education is the paramount board in the management of the schools. These ten are Alabama, Florida, Kentucky, Louisiana, Maryland, New Mexico, North Carolina, Tennessee, Virginia and Utah. In three of these—Florida, Louisiana, and Maryland—city schools as well as country schools are under the management of county boards. In the other states the incorporated cities are independent in most respects.

"Five other states have partly the county and partly the district system, or such a division of authority between district and county that they may be considered as in a state of transition from district to county system. These states are South Carolina, Mississippi, Georgia, Oregon, and Montana. In a number of other states—Arizona, Washington and California, for example—the county is important in school support but not in administrative control.

"There is unusual interest in many states organized on the district unit plan in establishing larger units of organization in order to secure better management and a larger tax valuation on which to draw for school support. In a number of these states the county, being the civil unit, is favored also as a unit apt to be efficient for the administration of schools.

"In some states the county is at present an important unit for school purposes, particularly for financing schools. In other states the county is not now an important unit for school purposes. New York and New England are outstanding examples. In a number of states now organized on the district plan there is considerable sentiment against centralization of schools to the extent of that involved in a county unit.

"In response to the need for a larger unit and in consideration of the sentiment against the county unit a community-unit plan has been advocated by students of education in several states. It is believed by these advocates that it may offer a compromise between the extremes of over and under centralization of responsibility for the support and control of schools. The plan is believed to have great merit. So far, however, it has not been tried out in any of the states for which advocated.

"In a large number of states considering progressive legislation looking toward larger and better administrative units, the county-unit plan is being carefully studied."

HEALTH — *by a twist of the wrist!*



BY a twist of the wrist—a turn of a knob—fresh, outdoor air!

Fresh, invigorating air—filtered clean—at the temperature desired!

No dangerous cold-day "open-window" draft—no "closed-window" stuffiness.

Positive control of classroom ventilation at all times.

The complete story of the Sturtevant Unit Ventilator—its application, design, and construction—will be sure to interest any school official, school architect, or heating and ventilating engineer. The nearest office below would welcome your request for a copy.

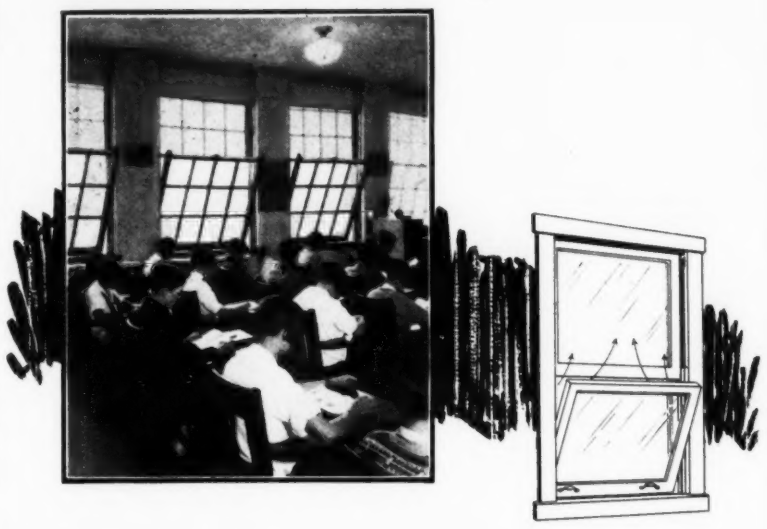
B. F. STURTEVANT COMPANY, Hyde Park, Boston, Mass.

Atlanta	Chicago	Detroit	Minneapolis	Rochester
Boston	Cincinnati	Hartford	Montreal	St. Louis
Buffalo	Cleveland	Indianapolis	New York	Salt Lake City
Camden	Dallas	Kansas City	Pittsburgh	San Francisco
Charlotte	Denver	Los Angeles	Portland	
		Seattle		Washington

Sturtevant *Unit Ventilator*

REG U.S PAT OFF

HEAT *and* VENTILATION

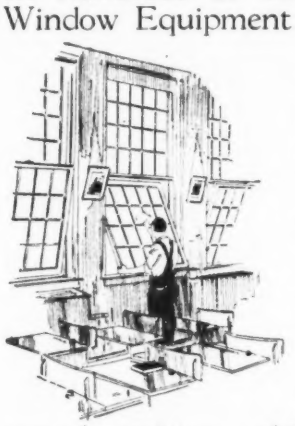


Back From Outdoors

—will their classrooms be Stuffy or Drafty?

September brings new obligations to those responsible for the education and progress of growing generations. Healthy young folks, back from outdoors, must be *kept healthy* through hours of indoor study.

In hundreds of schools Williams Reversible Window Equipment is helping to keep young folks keen and alert through the proper circulation of fresh air. Williams Plank Frame type reversible windows provide ideal draftless ventilation. With the sash tilted on cold days, incoming air is deflected upward. On warm days, or for open air classrooms, both windows may be tilted to a horizontal position, taking full advantage of the entire window opening.



Economical to Clean

In addition to the advantages of correct ventilation, Williams Equipment reduces the cost of cleaning. All windows are cleaned from inside the room, thus making it practical to employ cheaper help and to eliminate extra insurance premiums which must be paid for outside window washers.

Installations are made accurately under the supervision of the manufacturer. The sash fit snugly and are weathertight. Even after years of use, these windows will not rattle.

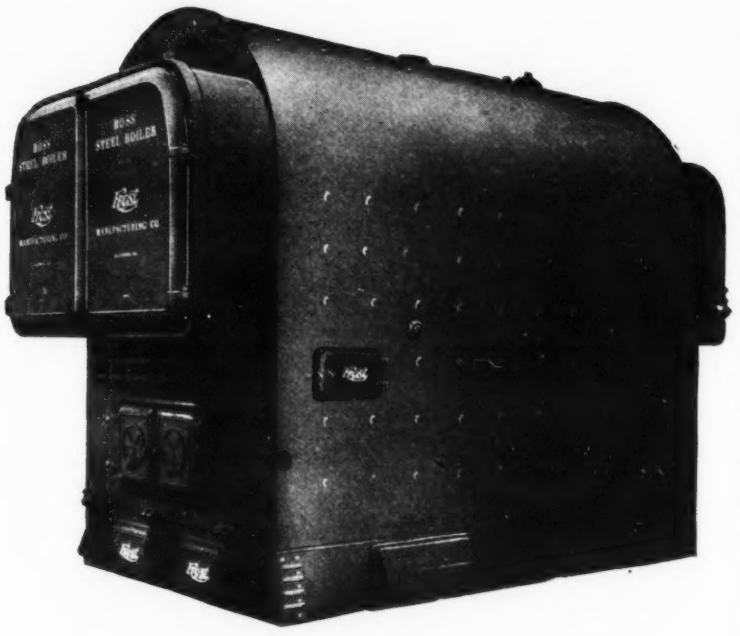
A list of notable schools using Williams Reversible Window Equipment will be gladly furnished on request.

The Williams Pivot Sash Co.
E. 37th St. at Perkins Avenue, Cleveland, Ohio

WILLIAMS REVERSIBLE WINDOW EQUIPMENT

ROSS *Steel* BOILERS

Commonly acknowledged the supremely efficient and economical heating plant for school houses because of quick response to heating needs.



A SOLID UNIT OF ELECTRICALLY WELDED OPEN HEARTH STEEL, MADE TO OUTLAST YOUR BUILDING.

WHEN school opens this Fall the health of teachers and scholars and the whole moral of the school depend on your heating plant. You will render your community and the children under your care a vital service by insisting on the proper heating plant for your new or renovated building.

The Ross Steel Boiler with the smokeless firebox, long combustion chamber, exceptional Crown Sheet area, plus extended hot gas travel and rapid circulation extracts the utmost of heat units from any fuel. The patented Convex full length, self-cleaning Crown Sheet banishes the usual accumulation of silt over the hottest part of the furnace and the consequent loss of heat.

The Ross Steel Boiler is especially adapted for burning oil and the cheaper grades of coal.

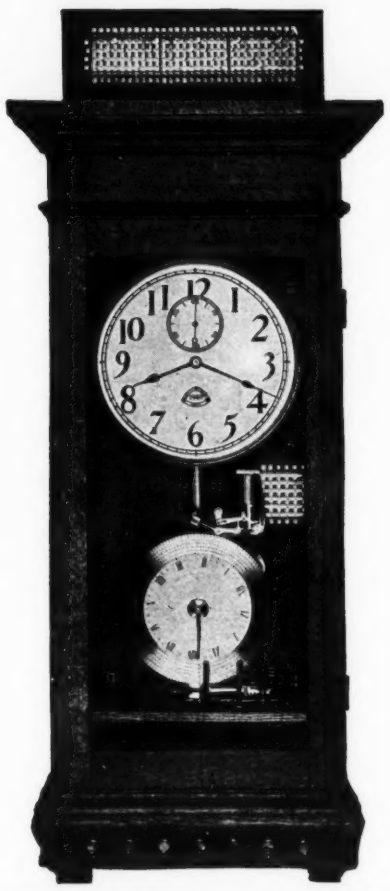
Write for Catalog and inform yourself on the advantages of this boiler.

The Frost Manufacturing Co.
SINCE 1851

1524 HENDERSON ST., GALESBURG, ILLINOIS

BRANCHES:

ATLANTA
BALTIMORE
BROOKLYN
CHICAGO
CINCINNATI
CLEVELAND
DETROIT
DULUTH
FT. WORTH
LINCOLN
MEMPHIS
MILWAUKEE
NEW ORLEANS
NEW YORK
OMAHA
PEORIA
ROCHESTER
ST. LOUIS
SAN ANTONIO
TORONTO, CANADA



FREE ENGINEERING SERVICE
CATALOGUE ON REQUEST

MANUFACTURERS OF
ELECTRIC TIME AND PROGRAM CLOCKS
FIRE-ALARM AND TELEPHONE SYSTEMS

Our Aim For Nearly Half Century
TO SUPPLY
Educational Institutions with the Best Equipment Obtainable

RECOGNIZED BY ELECTRICAL AND MECHANICAL ENGINEERS THROUGHOUT THE COUNTRY AS THE HIGHEST QUALITY, SIMPLEST AND MOST ECONOMICAL EQUIPMENT PRODUCED.

One Quality—One Price—One Policy

The Landis Engineering & Mfg. Co.
WAYNESBORO, PENNA.

TEACHERS' SALARIES

THE SALARY QUESTION AT SAN JOSE

The federation of teachers' clubs of San Jose, California, presented a new salary schedule to the board of education of that city. This schedule, if put into effect, would raise the maximum salary of grade teachers, which is now $2,000, to $2,400, and the maximum salary of high-school teachers, now $2,500 to $2,800. It is stated in the application that the schedule would add to the budget for salaries $95,476. It is also pointed out that 85 per cent of the increase would go to teachers who are now receiving the maximum. If the salaries of all grade- and high-school teachers were raised it would be necessary of course to raise correspondingly the salaries of principals and supervisors. The practical effect of the new schedule, therefore, would be an increase of about $110,000.

The schedule indicates that in relation to the entire list of California cities San Jose's elementary pay is $183 below average, and high school, $45 below. Taking Oakland, San Francisco, Los Angeles, and Pasadena from the list, however, San Jose's average, it is seen, is but $32.20 below for elementary, and $43.90 above, for high-school pay.

City	Elementary Maximum	High Maximum
Oakland	$2460	$2820
San Francisco	2400	2800
Los Angeles	2200	2800
Pasadena	2200	2800
Sacramento	2200	2700
Berkeley	2300	2700
Long Beach	2050	2600
San Jose	2000	2580
Alameda	2000	2360
San Diego	2000	2600
Stockton	1980	2475
Santa Barbara	1900	2500
Fresno	1860	2400
Average	$2183	$2625
San Jose	2000	2580
Below average	$ 183	$ 45

Average of nine cities omitting Oakland, San Francisco, Los Angeles and Pasadena, elementary, $2032.20; high, $2536.10.

SALARY INCREASES AT PASADENA

Nearly 200 teachers employed at Pasadena, Calif., will receive increases of from $50 to $300 a year.

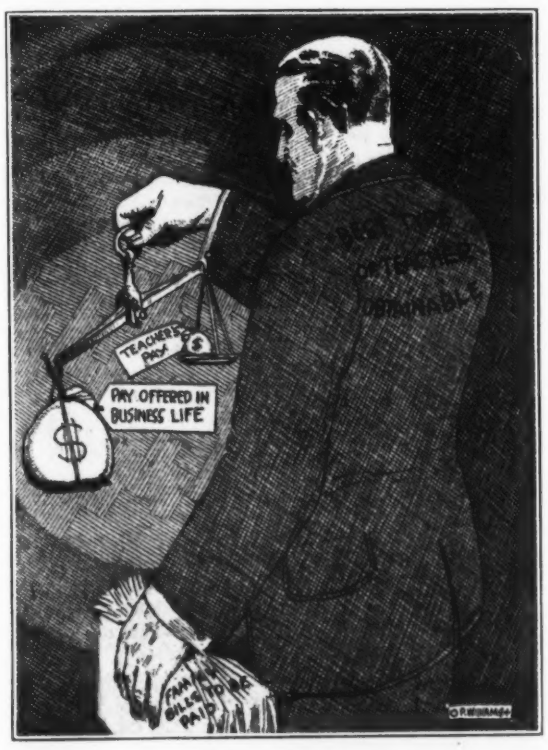
The maximum salary for elementary teachers was increased from $2,200 to $2,300, in two steps of $50 each. Those who have the tenth year rating will receive $2,250 and those who have the eleventh year rating will receive $2,300 a year.

Assistant supervisors will receive a maximum salary of $3,000, instead of $2,700 as formerly. The ratings will be as follows: Eighth year, $2,800; ninth year, $2,900 and tenth year, $3,000.

Teachers in the junior and senior high schools and junior college will receive a maximum of $2,900 a year, instead of $2,800. This increase consisted in adding a twelfth-year rating, carrying an increase of $100.

Department heads and assistant principals of junior high schools will receive a maximum yearly salary of $3,400, an increase of $100. The increase is provided in the addition of an eighth-year rating of $3,400.

Between $10,000 and $15,000 a year will be paid out in increased salaries on the revised schedule, according to an estimate made by the school auditor.



HOLDING THE TEACHER.
—Seattle Post-Intelligencer.

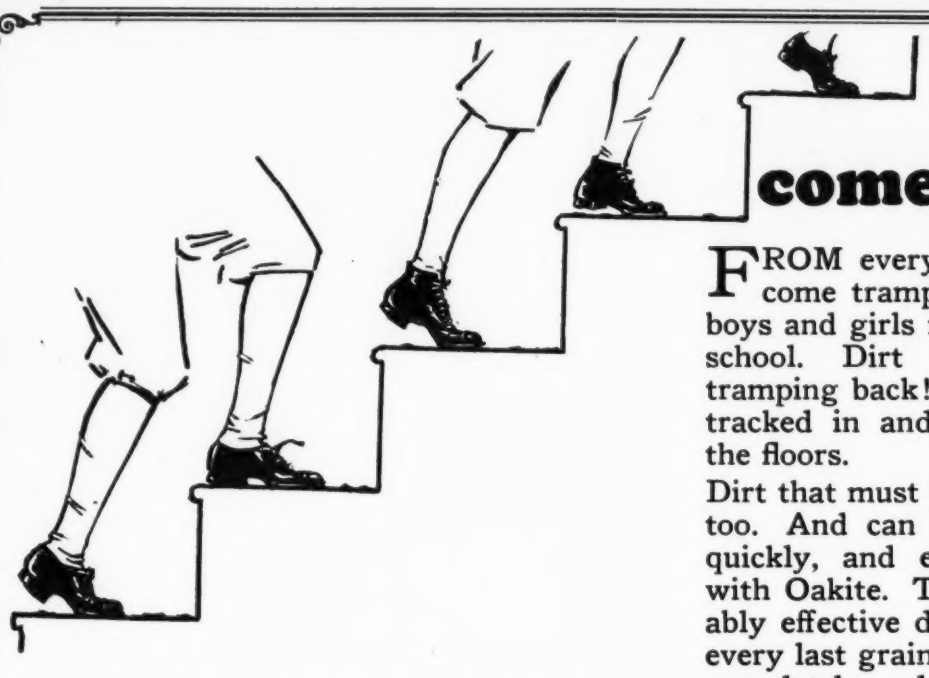
EASTON, PA., ADOPTS SINGLE-SALARY SCHEDULE

—The board of education of Easton, Pa., has adopted a single-salary schedule, according to which salaries will be the same for elementary, junior-high-school and senior-high-school teachers having the same training and experience.

Under the schedule teachers are divided into four groups as follows: Teachers in group one comprise those with two years of normal-school training, who will be paid a minimum of $1,000, with eight annual increments of $100 up to a maximum of $1,800; teachers in group two comprise those with three years of normal-school training, who will be paid a minimum of $1,200, with eight increments of $100 up to a maximum of $2,000; teachers in group three comprise those with four years of normal or college training and a degree, who will be paid a minimum of $1,400, with eight increments of $100 up to a maximum of $2,200; teachers in group four comprise those with an M.A. degree with a major in a teaching subject, who will be paid a minimum of $1,600, with eight annual increments of $100 up to a maximum of $2,400.

Under the rules, no salary increments will be given for credits necessary to meet minimum requirements. No increments will be given to any teacher for additional study unless she is rated satisfactory in cooperation and general teaching efficiency.

Credit toward salary increments will be given only in recognition of study which has a direct bearing upon the duties that a teacher actually performs. It is the purpose to grant salary increments



Dirt also comes tramping back!

FROM everywhere they come tramping back — boys and girls returning to school. Dirt also comes tramping back! Dirt that's tracked in and strewn on the floors.

Dirt that must be removed, too. And can be — easily, quickly, and economically with Oakite. This remarkably effective detergent, every last grain of which is completely soluble, cleans floors ***thoroughly***. Removes grease, oil, dust ***completely***, even from corners and other hard-to-get-at places. Leaves no soapy film.

Oakite is absolutely safe to use. It contains no abrasives or scouring grits, no grease, — nothing that can injure any type of flooring, wall or marble.

Let one of our Service Men talk over ***any*** cleaning problem with you. He can show you how to save money. Merely drop us a line — no obligation.

Oakite Service Men, cleaning specialists, are located at Albany, N. Y., Allentown, Pa., *Atlanta, Ga., Altoona, Pa., Baltimore, *Birmingham, Ala., *Boston, Bridgeport, *Brooklyn, Buffalo, *Camden, N. J., Charlotte, N. C., Chattanooga, Tenn., *Chicago, *Cincinnati, *Cleveland, *Columbus, O., *Dallas, *Davenport, *Dayton, O., Decatur, Ill., *Denver, *Des Moines, *Detroit, Erie, Pa., Flint, Mich., Fresno, Calif., *Grand Rapids, Harrisburg, Hartford, Houston, Texas, *Indianapolis, *Jacksonville, Fla., *Kansas City, *Los Angeles, Louisville, Ky., *Memphis, Tenn., *Milwaukee, *Minneapolis, *Montreal, Newark, Newburgh, N. Y., New Haven, *New York, *Oakland, Calif., *Omaha, Neb., *Philadelphia, *Pittsburgh, Pa., Portland, Me., *Portland, Ore., Providence, Reading, *Rochester, Rockford, Ill., Rock Island, *San Francisco, *Seattle, *St. Louis, South Bend, Ind., Syracuse, *Toledo, *Toronto, Trenton, N. J., *Tulsa, Okla., Utica, *Vancouver, B. C., Williamsport, Pa., Worcester, Mass.

*Stocks of Oakite Materials are carried in these cities.

Oakite is manufactured only by

OAKITE PRODUCTS, INC., 26B Thames St., NEW YORK, N. Y.

(Formerly OAKLEY CHEMICAL CO.)

OAKITE

TRADE MARK REG. U.S. PAT. OFF.

Industrial Cleaning Materials and Methods

only for additional preparation that increases a teacher's usefulness to the school system. Credit for advanced study will be applied to salary increment only when the studies have been approved by the superintendent and after a grade of C or better has been earned. Credit will be evaluated and applied toward the salary increment only at the time teachers are employed for the ensuing school year. The smallest fraction of a year's work that may be credited toward a salary increment will be a fifth of a year's work carrying a permanent increment of $40.

TEACHERS' SALARIES

—Under a new salary schedule adopted at Cincinnati, Ohio, teachers are divided into four groups. Teachers in group one with two years of normal-school preparation receive a minimum salary of $1,400, which may be increased by annual increments of $100 to $2,000. Group two comprises teachers with three years of normal-school preparation, who receive a minimum salary of $1,500 and annual increments of $125 to $2.500; college graduates comprise group three which provides a minimum salary of $1,600 and annual increments of $150 to $3,250. In group four are listed those with the equivalent of a year of professional preparation in addition to four years of college credits, and who have served a year at the maximum of group three; they will receive a minimum of $3,400 and a maximum of $3,500.

—Crookston, Minn. The board of education has adopted a salary schedule which makes increases dependent upon summer-school attendance once in every three years. The arrangement has induced a number of teachers to take advanced work at the state university.

—Principals of schools in Newark, N. J., have requested that a maximum salary of $7,500 be given them after eleven years of service without regard to grade. The maximum is now $5,500 to $7,000.

—The Mt. Pleasant, Mich., board of education adds permanently to the salary of teachers who do summer-school work. The salary increase amounts to $4 per semester hour in the University, or $2.50 per term hour in normal schools.

—Paterson, N. J. The board of education has increased the maximum of the salary schedule for practically every member of the teaching staff, in amounts ranging from $300 to $600. The schedule affects 900 employees and means an additional budget amount of $15,000.

Under the schedule, elementary teachers have been advanced from a maximum of $2,500 to $2,800; high-school teachers from $3,600 to $4,200; vocational instructors from $3,000 to $3,500; elementary vice-principals from $3,200 to $3,800, and supervisors from $4,000 to $4,300.

—Carbondale, Pa. The school board has taken steps to establish a sinking fund to guarantee the payment of teachers' salaries during the coming year. Under the plan, a certain number of mills to take care of salaries for the ten months of the year will be reserved as received from the tax collector. At present the board is $90,000 in arrears in salaries of members of the teaching staff and this amount must be cleared off before the new plan goes into effect.

—A new single-salary schedule has been adopted by the school board at Monett, Mo. The schedule was adopted upon the recommendation of a committee representing the board and the teachers.

—School teachers in Madison county, Illinois, received higher salaries in 1927 than the previous year, according to figures compiled by F. M. Scott, county superintendent of schools. The report shows that 127 men teachers in the county earned a total of $230,673 during the last year, while 655 women instructors were paid a total of $770,415. The average salary for men teachers during the past year was $1,816, and the average for women teachers was $1,176.

—The state education department at Charleston West Virginia, has issued a report showing the cost of home-economics instruction for the year ending June 30, 1927. The report shows that the total cost of salaries of teachers in junior and senior high schools is $335,782, and that for salaries of teachers in normal schools, colleges, and universities $49,400, making a grand total cost of $385,182.

A study of the average salaries of teachers of home economics in high schools shows that the highest salary in white high schools is $2,500, and the lowest $900; the highest salary in negro high schools is $1,800, and the lowest $922; the highest in white and negro high schools is $2,500, and the lowest $900. The average salary in white high schools is $1,526; in negro high schools $1,372; in which was made up of leading educational, social, white and negro high schools $1,510.

—Associate Supt. Harold G. Campbell of New York City, in charge of high schools, in his annual report for 1925-26, has declared that "there is room for doubt that salaries, especially of men teachers, in the high schools, are too low to attract men of personality, training, and teaching ability needed for training the boys and girls of New York City."

Supt. Campbell holds that principals and teachers are finding it necessary to make their schoolwork a part-time job in order to decently support their families. He points out that he cannot urge the faculties to more strenuous and effective teaching because of the economic condition which they are facing.

Honorariums for Harmon Fields in 1928

The honorariums for Harmon fields to be awarded in June, 1928, have been planned for the purpose of enlarging the usefulness of affiliated playgrounds in bringing about a wider interest in recreation locally, and increased activity in the permanent playground movement.

Determination of the relative progress of the various fields competing for the awards is to be decided by the facts as shown through magazine and newspaper publicity and photographs. All material submitted will be used by the division of playgrounds to stimulate the establishment of more fields.

The awards will reach a total of $5,000 and are divided as follows: First award, $500; second award, $400; third award, $300; fourth award, $200; fifth award, $150; fifteen awards of $100, and 39 awards of $50. The winning fields will be selected by a jury of five to be named in September.

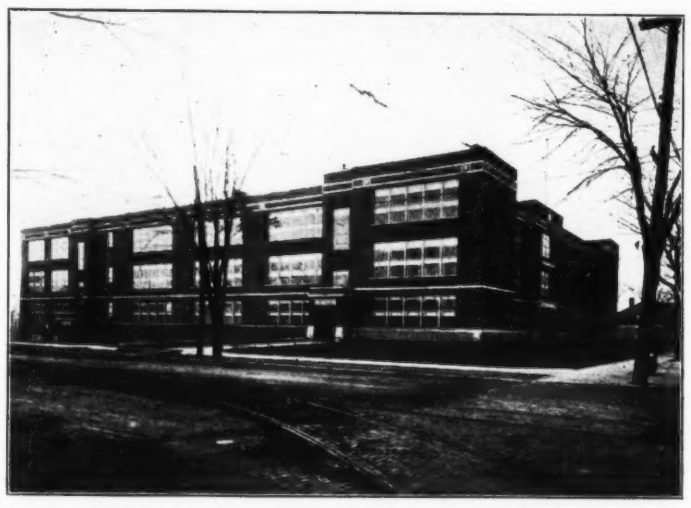
Announce Harmon Survey Awards

Miss Ethel Richardson, assistant state superintendent of California, has been awarded the $1,000, with a gold medal of the Harmon Survey Award for the "development of a distinctive contribution to the social, civic, or industrial welfare of the country."

The Harmon Survey Award of $500 and a gold medal for an article making the most distinctive contribution of the year to social and industrial welfare went to Prof. W. Z. Ripley, of Harvard University. Each of the awards was made on the basis of the judgment of the jury appointed to each, and civic leaders of the country.

RESULTS COUNT MORE

BINGHAMTON N. Y.
ADOPTS
HEATOVENTS
FOR ITS THIRD NEW HIGH SCHOOL BLDG.



Christopher Columbus School erected in 1926 was equipped with forty-seven (47) Buckeye Heatovents.

Architects

TIFFANY & KALEY, Binghamton, N. Y.

Heating Contractor

GAYLORD & EITAPENC, Binghamton, N. Y.

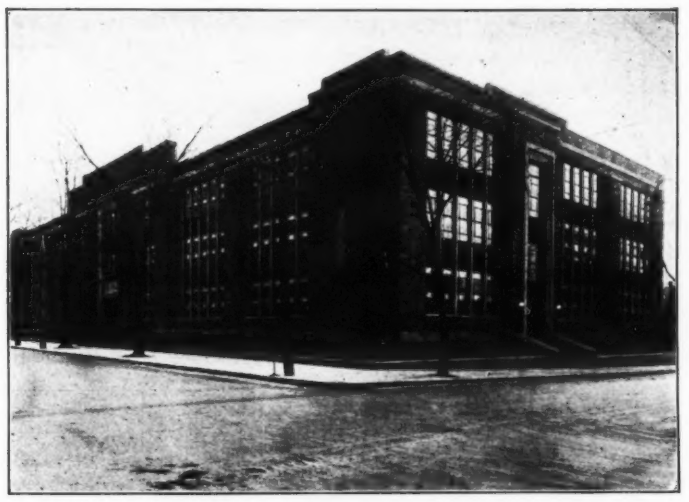
East Junior High School erected in 1925 was equipped with forty-nine (49) Buckeye Heatovents.

Architects

T. I. LACEY & SONS, Binghamton, N. Y.

Heating Contractor

M. E. Lewis, Binghamton, N. Y.



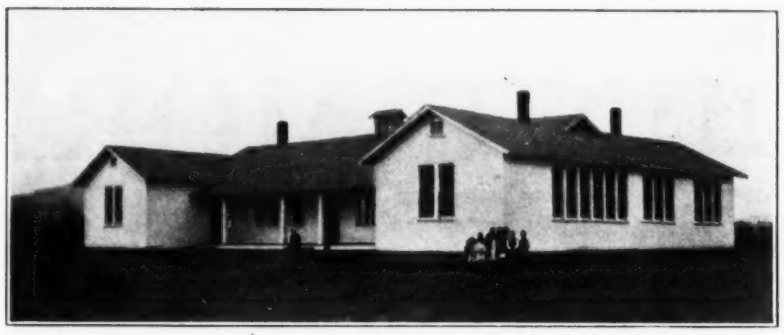
BENJAMIN FRANKLIN School now under construction will be equipped with Forty-nine (49) Buckeye Heatovents. Heating Contract let to Gaylord & Eitapenc, Binghamton, N. Y. Architects, Conrad & Cummins, Binghamton, N. Y. (photo not yet available).

Results from previous installations are the best recommendations for the use of Buckeye Heatovents, the modern, self-contained Unit Heating and Ventilating System.

THE BUCKEYE BLOWER CO.
COLUMBUS, OHIO

BRANCH SALES AND SERVICE OFFICES

Atlanta, Ga., 254 Peachtree St.
Baltimore, Md., 2126 Edmondson Ave.
Birmingham, Ala., 321 Brown-Marx Bldg.
Boston, Mass., 260 Tremont St.
Buffalo, N. Y., 321 Jackson Bldg.
Chicago, Ill., 401 Transportation Bldg.
Cleveland, Ohio, 204 Plymouth Bldg.
Denver, Colo., 1226 California St.
Detroit, Mich., 400 Penobscot Bldg.
Hempstead, L. I., N. Y., 2nd National Bank Bldg.
Indianapolis, Ind., 3115 N. Central Ave.
Kansas City, Mo., 1101 Pioneer Trust Bldg.
Los Angeles, California, 1824 S. Hope St.
Milwaukee, Wis., 409 Loan & Trust Bldg.
Minneapolis, Minn., 416 Essex Bldg.
New York City, 1400 Broadway.
Newark, N. J., 403 Military Park Bldg.
Pittsburgh, Pa., 709 Columbia Bank Bldg.
Portland, Ore., Security Bldg.
Salt Lake City, U. 402 Scott Bldg.
San Francisco, Calif., 746 Sansome St.
Syracuse, N. Y., 324 Union Bldg.
Toronto, Canada, 21 River St.
Youngstown, Ohio, 1101 Realty Bldg.



FOUR-TEACHER COMMUNITY SCHOOL IN TENNESSEE.
(A ROSENWALD SCHOOL.)



ELAINE NEGRO SCHOOL PLANT, PHILLIPS COUNTY, ARK.
(A ROSENWALD SCHOOL.)

ROSENWALD SCHOOLS IN 1926-1927
The Progress of Rural Schoolhouse Construction Work Under the Rosenwald Fund

Mr. S. L. Smith, general field agent for the rural schools of the Rosenwald Fund, has issued his annual report for the year 1926-27, showing a total of 545 school buildings constructed during the last year, at a total cost of $2,812,718. The total of completed buildings up to July, 1927, is 3,912, at a total cost of $17,641,664. In addition, the report gives a summary of various teacher types of buildings erected, the plan for the distribution of aid during the present year, and a reproduction of the schoolhouse construction map to July, 1927.

For the year ending June 30, 1927, the Rosenwald Fund gave aid toward the construction of 545 building projects—459 new schools, 20 teachers' homes, and 66 additions of 128 rooms to Rosenwald schools previously built—located in Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

The 479 completed buildings and 66 additions of 128 rooms cost $2,812,718, of which the negroes contributed $440,353, the whites $90,719, the school authorities $1,870,949, and the Rosenwald Fund $410,697.

The Rosenwald Fund cooperates through the school authorities in efforts to provide and equip better schoolhouses for the negroes of the southern states. Such equipment as desks, blackboards, heating apparatus, vocational facilities, libraries, and sanitary toilets is deemed of equal importance with the schoolhouses themselves.

The Fund deposits with each cooperating state department of education a sum of money recommended by the general field agent to constitute a working capital, from which the proper official may make disbursements as required. The Fund may be replenished from time to time as the work is inspected and approved by an authorized agent of the department.

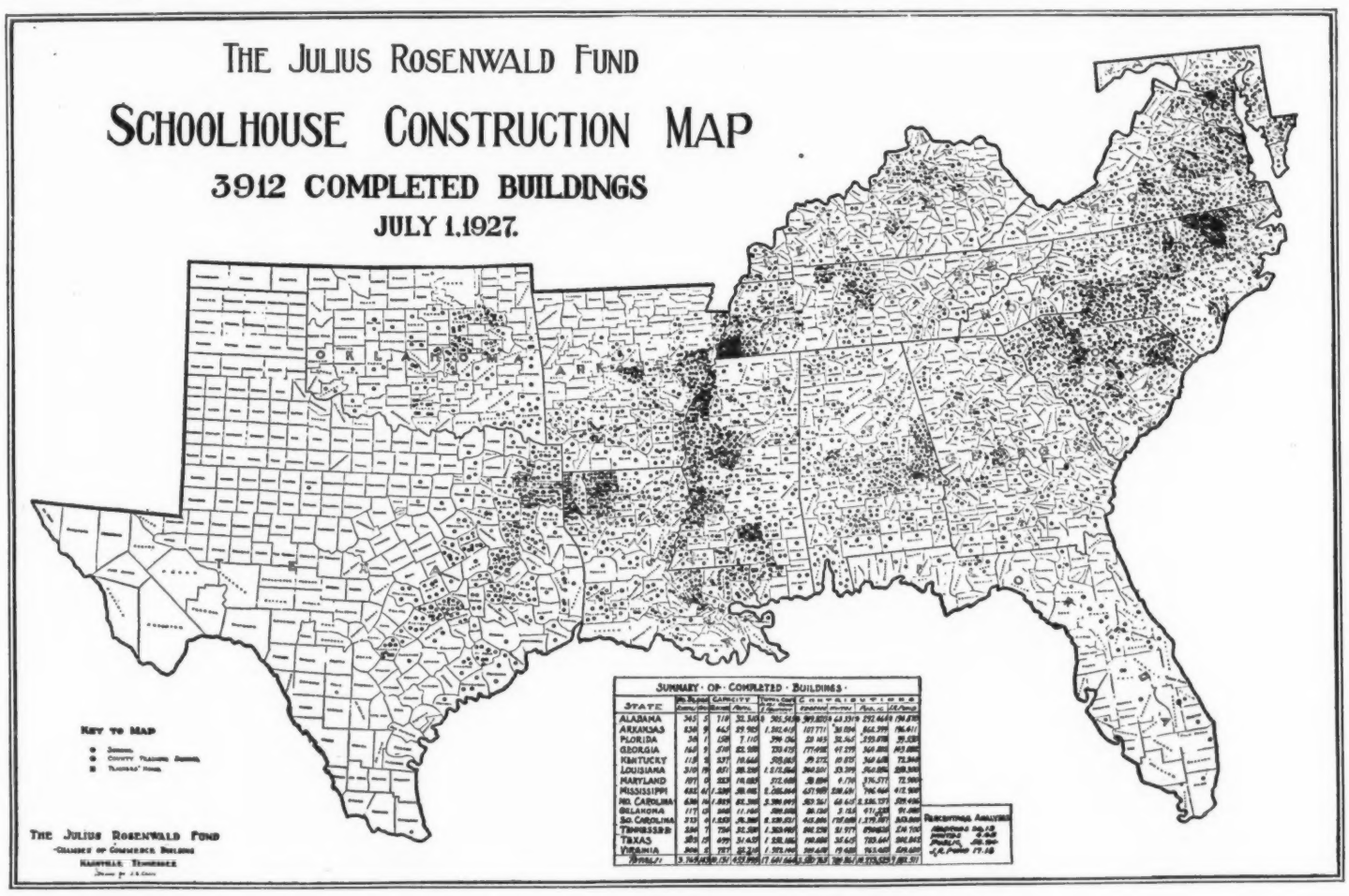
In connection with the erection of a school of two-teacher type or larger, where the annual school term is eight months or more, the fund cooperates in the construction of a teachers' home to be completed and furnished to correspond with the building. The amount of aid given on a teachers' home may not exceed one half of the total cost, the maximum allotment from the fund for such purpose being $500 for a four-room home, $700 for a five-room home, and $900 for a six-room or larger home. As in the case of the school buildings, the teachers' home is deeded to the school authorities.

The plan has been in operation only fifteen years, but it has been successful in offering encouragement of adequate education for negro children, especially in the rural regions of the south. The influence of the Rosenwald Fund may be seen not only in the establishment of these modern school plants but in the general improvement of educational facilities for negroes throughout the south. The influence of the work may be seen when it is said that only 5.0 per cent of the one-teacher schools are Rosenwald, while 29.3 per cent of the two-teacher, 31.2 per cent of the three-teacher, 31.7 per cent of the four-teacher and larger schools have been helped by the fund. The Rosenwald schools provide 27.4 per cent of the pupil capacity for the total enrollment of negro children. There are now 209 four-year negro high schools, North Carolina leading with 49 and Texas coming second with 25. There are in addition, 592 nonaccredited schools doing from two to four years of high-school work. The total enrollment in these schools is 68,606 and 6,435 young people have been graduated at the completion of a full four-year course.

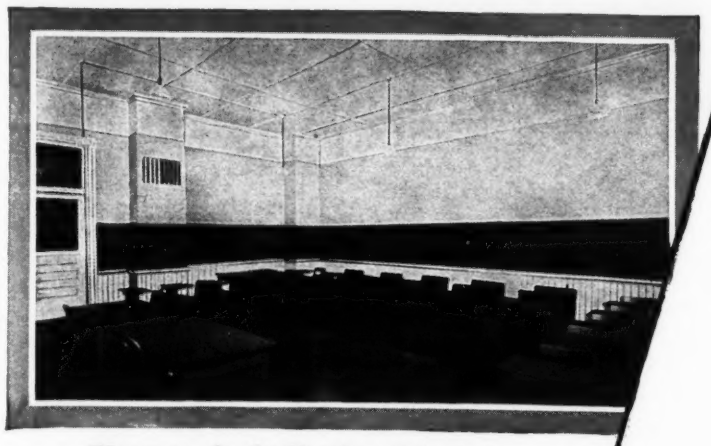
Federal Trade Commission and Correspondence Schools

Considerable activity during the past year in checking the practice of fradulent advertising by correspondence schools has resulted in a set of voluntary rules to govern the activities of 81 such schools doing 80 per cent of the nation's business in this field. These rules were prepared by representatives of the schools in conference with the Federal Trade Commission, the U. S. Bureau of Efficiency and the U. S. Civil Service Commission. They are to be effective January 1, 1928.

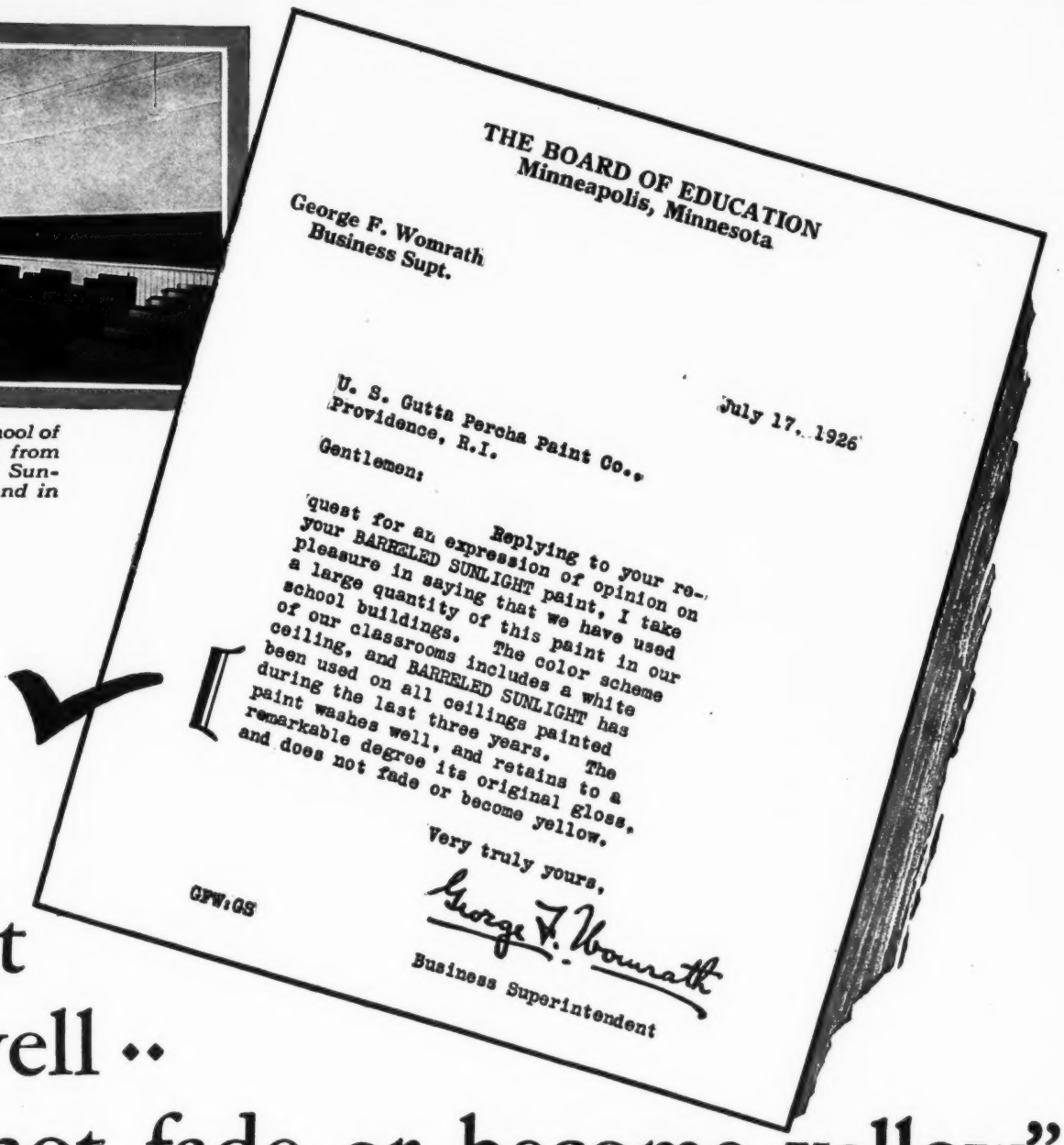
The rules condemn practices in advertising which tend to misrepresent the standing of the schools, and to hold out promises and semi-promises to students which the schools are unable to fulfill. It is a step in making the advertising of the schools honest and truthful and to eliminate the extravagant and fraudulent statements now made by many of them.



THE LOCATION OF 3,912 ROSENWALD SCHOOLS IN THE SOUTHERN STATES.



Classroom in the Harrison School of Minneapolis which is painted from top to bottom with Barreled Sunlight, white on the ceilings and in tints on the walls



THE BOARD OF EDUCATION
Minneapolis, Minnesota

George F. Womrath
Business Supt.

July 17, 1926

U. S. Gutta Percha Paint Co.,
Providence, R.I.

Gentlemen:

Replying to your request for an expression of opinion on your BARRELED SUNLIGHT paint, I take pleasure in saying that we have used a large quantity of this paint in our school buildings. The color scheme of our classrooms includes a white ceiling, and BARRELED SUNLIGHT has been used on all ceilings painted during the last three years. The paint washes well, and retains to a remarkable degree its original gloss, and does not fade or become yellow.

Very truly yours,

George F. Womrath

Business Superintendent

GFW:GS

"The paint washes well .. and does not fade or become yellow"

Mr. George F. Womrath is widely recognized as an authority on school maintenance. What he says in the above letter about interior paint is well worth reading.

The Minneapolis schools under Mr. Womrath's management have used several thousand gallons of Barreled Sunlight. A thoroughly adequate test on which to base an opinion!

* * *

Wherever best possible light and sanitary cleanliness are essential, Barreled Sunlight Gloss sets the standard. A lustrous surface so satin-smooth it washes like tile—and so durable it does not wear away under washing. Handsome as the finest enamel, but costs less and requires fewer coats!

And for rooms where a flat finish is sometimes preferred, nothing is more suitable than Barreled Sunlight Flat. Extremely handsome and uniform.

Barreled Sunlight Semi-Gloss strikes a happy medium between these two finishes and is ideal for many uses.

When used in the pure white, Barreled Sunlight is guaranteed to remain white longer than any gloss paint or enamel applied under the same conditions.

You can get Barreled Sunlight in cans from ½ pint to 5 gallons, and in 30- and 55-gallon churn-equipped drums. Where more than one coat is required, use Barreled Sunlight Undercoat first. See coupon below.

U. S. GUTTA PERCHA PAINT CO.
Factory and Main Offices
44 DUDLEY STREET, PROVIDENCE, R. I.
New York—420 Lexington Ave., Chicago—659 Washington Blvd.
San Francisco—156 Eddy Street
Distributors in all principal cities



White—or Easily Tinted

By simply mixing colors in oil with Barreled Sunlight white, the painter on the job can easily obtain any desired shade. In quantities of 5 gallons or over we tint to order at the factory, without extra charge. For tinting small quantities our dealers carry handy tubes of Barreled Sunlight Tinting Colors.

Barreled Sunlight

Reg. U. S. Pat. Off.

U. S. GUTTA PERCHA PAINT CO.
44 Dudley Street, Providence, R. I.

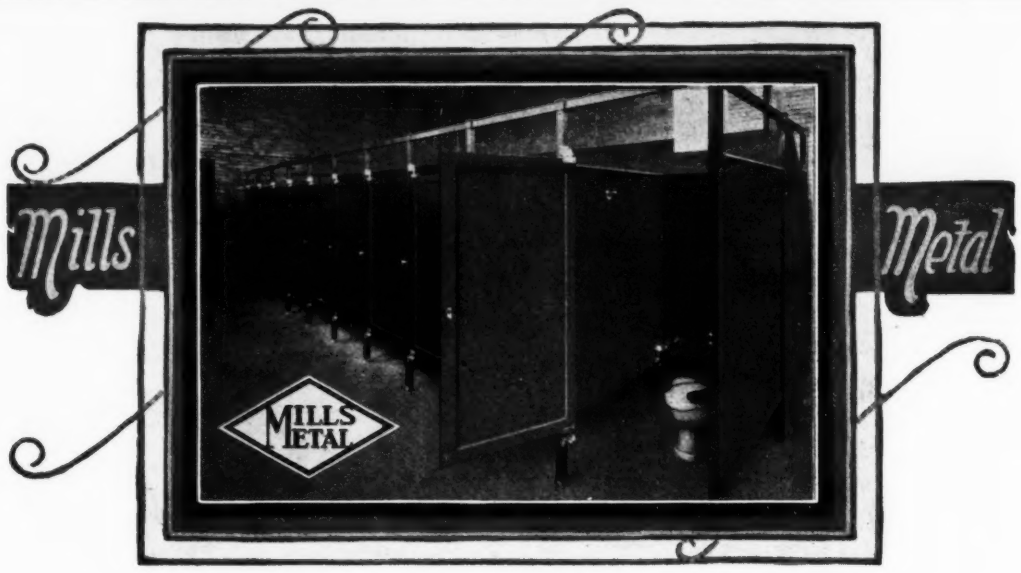
Please send me your booklet "Interiors of Lasting Whiteness," and a panel painted with Barreled Sunlight. I am interested in the finish checked here—

Gloss ( ) Semi-Gloss ( ) Flat ( )

Name.....

Street.....

City..... State.....



Leadership—an Advantage and a Responsibility

IN every field of endeavor there is always one concern, outstanding, dominant, leading the crowd in service, improvements—its leadership develops the necessity of maintaining leadership.

Mills Metal Toilet Partitions occupy this position—have for some time and *expect to maintain it.*

The Mills Company
905 WAYSIDE ROAD, CLEVELAND, OHIO

MILLS METAL

NEW YORK OFFICE
7 West 42nd St.
Phone Longacre 10263

CHICAGO OFFICE
1216 First Natl. Bldg.
Phone Dearborn 6100

DETROIT OFFICE
2231 Park Ave.
Phone Randolph 3000

Representatives in all principal cities

PERSONAL NEWS OF SCHOOL OFFICIALS

—Mr. Samuel B. Pettengill has been elected as president of the board of education of South Bend, Ind., to succeed Dr. R. B. Dugdale, who becomes secretary of the same body. Mr. Frank Mayr, Jr., has been named treasurer to succeed Mr. Pettengill.

—The board of education of Dayton, Ohio, has since June, 1926, employed a business manager to look after the business affairs of the schools. The reorganization of the business department and its administration under Mr. J. W. Graham has resulted in efficiency and economy, according to Supt. Paul C. Stetson, who in summarizing school progress of the last year points to this departure as one of the notable achievements of the year.

—Newell Angell and Stanley Hager were elected as members of the board of education of Big Creek and Mentor townships, Michigan.

—Roanoke, Va. The position of supervisor of buildings and grounds has been created with the appointment of Judge J. A. Page. Mr. J. S. McDonald has been elected clerk of the school board. The general care of the school property has grown to such proportions that it has become a burden upon the clerk of the board and it was felt that the supervisor would relieve the clerk of much of this work.

—Mr. W. G. Davis and Mr. John S. Knoertzer have been reelected to membership on the board of education of Alma, Mich., for terms of three years each.

—Mr. O. A. Gasaway has been elected business manager for the board of education at El Reno, Okla. Mr. Gasaway is a graduate of Phillips University at Enid, and has had sixteen years' experience in schoolwork.

—The school board at Wilmot, Ill., has organized with the election of Mr. George Dwell as president and Miss Blanche Carey as clerk.

—The school board of Houghton, Mich., on July 15, adopted a resolution of appreciation in recognition of the faithful service given by Mr. William F. Miller, the retiring secretary of the board. Mr. Miller was first elected a school trustee in 1903. During all of the time he had acted as the secretary carrying on the duties of the office, keeping the books of accounts, and preparing the reports needed from time to time. His long experience in school matters and his ability as an accountant made him especially valuable as a board member and official.

—Mr. W. H. Brunn has been reelected secretary of the East Waterloo, Iowa, school board for the twenty-seventh consecutive year.

—Mr. M. M. Konarski has been reelected as school architect for another year at Akron, Ohio.

—Mr. Carl G. Caddey has been elected secretary and business manager of the board of education at Tacoma, Wash. Mr. Caddey succeeds Alfred Lister who resigned last spring.

—Mr. J. E. Meyers has been elected president of the school board at Minneapolis, Minn.

—Mr. O. A. Ellis has been elected president of the school board at Armada, Mich., to succeed Mr. True.

—Mrs. Addie Lee Lowther has resigned as secretary and business manager of the school board at Guthrie, Okla., after a service of fourteen years.

—The school board of Minneapolis, Minn., has reorganized with the election of Mr. J. E. Meyers as president, and Mrs. H. T. Kilgore as secretary.

—A farewell banquet was recently given at Evansville, Indiana, in honor of Mr. Charles B. Enlow, retiring president of the board of education.

Following the dinner, the Rev. Rake acted as toastmaster. Members of the board in their remarks, paid splendid tribute to Mr. Enlow's leadership, all expressing regret at his leaving. Supt. J. O. Chewning, on behalf of his fellow workers on the board, presented Mr. Enlow with a handsome silver loving cup on which was engraved an appreciation of his services, as well as a list of some of the outstanding accomplishments during Mr. Enlow's ten years of service on the board.

A handsome brochure. "How a Public Office May Become a Public Trust." an excerpt of a report of Superintendent Chewning to the board, was presented in leather binding. Copies were also given to each present at the meeting.

Among those present were Mr. and Mrs. Enlow; Rev. F. J. Rake and Mrs. Rake; Mr. and Mrs. F. J. Erlbacher; Mr. and Mrs. J. O. Chewning; E. J. Fehn; M. S. Speers, business manager, and wife; R. C. Enlow; Herb Henderson, former business manager, and Mr. and Mrs. Knecht. Isidor Kahn, new member of the board appointed to fill the vacancy caused by Mr. Enlow's resignation, was among the guests.

—Mr. L. W. Schroeder has been elected to membership on the board of education at Marshall, Mich. Mr. Schroeder succeeds Dr. S. K. Church who has retired after sixteen years of service.

—A. A. Wall and H. J. Smith are the new schoolboard members of Central Lake, Michigan.

—W. R. Wright, W. P. Parks, and C. P. Berry were elected members of the county high-school board at Gillette, Wyoming.

—John R. Bachman is the new member on the school board of Hellertown, Pa. The board elected E. T. Eckert president and C. J. Bigot as vice-president S. A. Rentzheimer was elected treasurer, and E. Grace Oberle, clerk.

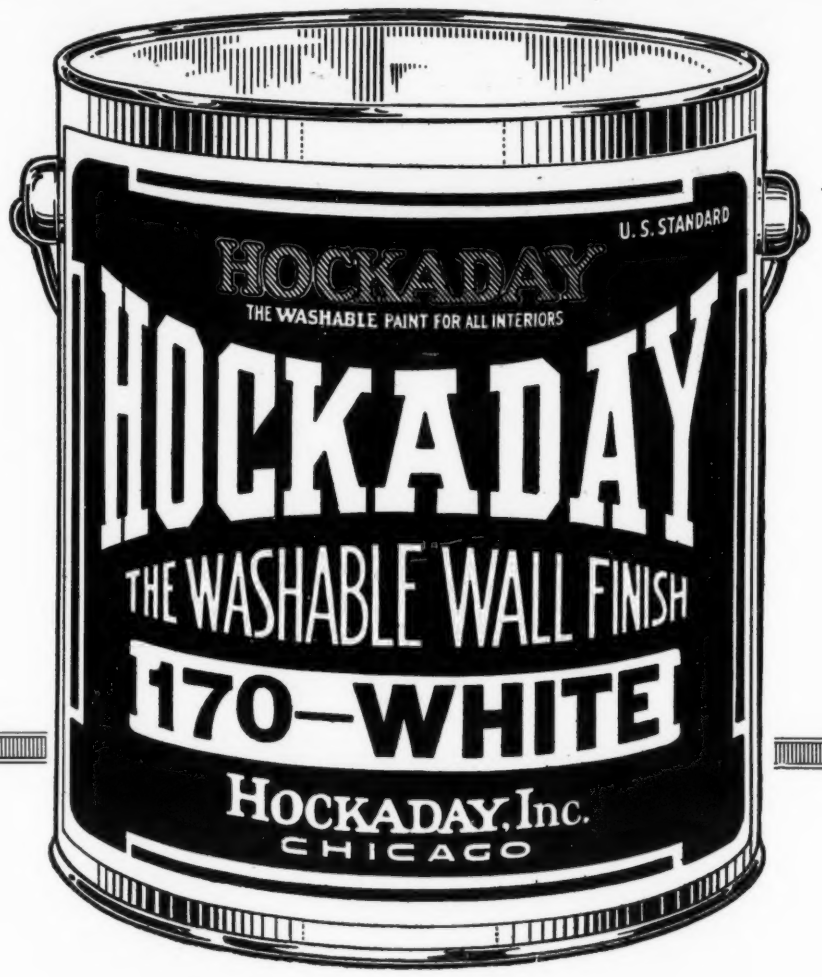
—Ralph J. Coryell and Guy Jensen were elected school trustees at Birmingham, Mich.

—The members elected to the union high-school board at Klamath Falls, Oregon, are: Clarence H. Underwood, Klamath Falls, five years; B. J. Loftsguard, Algoma, four years; W. C. Ezell, Summers, three years; Lewis Botens, Plevna, two years; and Leslie Rogers, Klamath Falls, one year. W. S. Wiley, who was appointed by Judge Bunnell as secretary of the board for one year, will serve this term out.

—The following were appointed members of the state board of education of Washington by Governor Hartley: W. M. Kern, Walla Walla city superintendent of schools, succeeds George B. Miller of Aberdeen; A. A. Schoffen, La Conner high-school principal, succeeds A. K. Millay, Chewelah, and Carl W. Morgan, Lincoln county superintendent of schools, succeeds E. C. Bowersox, of Wenatchee. The terms of the newly appointed members end on April 13, 1929. Terms of the retiring members expired some time ago but the governor made no appointments until now and the old members served the board during the interem.

—Emil Mohr was elected president of the school board at Medford, Oregon. Howard V. Scheffel and

(Continued on Page 124)



The WALLMARK of Quality

A paint you *can* forget, but *don't!*

When Hockaday paint leaves the factory, it does not leave factory supervision. No, sir! Though it is shipped away to distant cities in airtight cans, we follow and make sure of a good paint job.

But—

When Hockaday has been applied, when, according to our specifications, it is on the wall and has hardened with a smooth, egg-shell surface, we forget it!

The story from there on is an old one to us. We know how through the years it will retain its freshness, how with each washing it will shine out again like new, how it will resist lime-burn, checking, cracking and peeling.

Yes, sir, Hockaday is a paint you CAN forget, but one you don't! Only time does.

HOCKADAY, Inc.
1823-1829 CARROLL AVENUE
CHICAGO

The Hockaday Co. of California
625 Third St., San Francisco, Cal.

Los Angeles Hockaday Co.
420 Douglas Bldg., Los Angeles, Cal.

D. E. Fryer & Co., Seattle,
Tacoma, Spokane and Portland

HOCKADAY
THE WASHABLE PAINT FOR ALL INTERIORS

WRITE FOR YOUR COPY OF "PAINT MILEAGE"

"NONCO"

"PLUMBING NONCO FIXTURES"

The Name to look for on Plumbing Fixtures



PLATE 4384 N

Porcelain enameled iron roll rim drinking fountain with integral back, concealed hangers, vitreous china bubbler with concealed pressure regulator controlled by china index push button valve, ⅜-inch supply to wall, outlet strainer and 1¼-inch plain "P" trap.

For Trouble-Free Service

NONCO Plumbing Fixtures are actually trouble-free and what's more they are guaranteed to remain that way.

NONCO Plumbing Fixtures reflect in every detail the accumulated knowledge and skill of over 45 years of experience in manufacturing plumbing fixtures for schools. You can't go wrong if you specify and install NONCO brand of Plumbing Goods.

Our experts are always at your service and will be glad to offer any suggestions on any and all your plumbing problems.

Descriptive literature on request.

N. O. NELSON MFG. CO.

Pioneer Manufacturers of Plumbing Fixtures for Schools

MAIN OFFICE: ST. LOUIS, MISSOURI

FACTORIES:

EDWARDSVILLE, ILL. NOBLESVILLE, IND. BESSEMER, ALA.

BRANCHES:

Birmingham, Ala. Pueblo, Colo. Memphis, Tenn.
Little Rock, Ark. Davenport, Iowa Houston, Tex.
Los Angeles, Calif. Salt Lake City, Utah Dallas, Tex.

PIONEER MANUFACTURERS OF PLUMBING FIXTURES FOR SCHOOLS

(Continued from Page 122)

N. H. Franklin were reelected members of the board.

—John S. Rockwell heads the school board of Kalamazoo, Mich., as president.

—The new school trustees of Pasadena, Calif., are Charles H. Morse and Carl Z. Jackson.

—Twin Oaks, near Myrtle Point, Oregon, reelected Mrs. Marie Lundy as member of the school board. Mrs. Meta Rosslow was reelected clerk. E. W. Staats was reelected school trustee at Monmouth, Oregon.

—Oregon. Mrs. J. R. Craven was reelected and W. R. Soehren elected members of the school board of Dallas. W. O. Andrews and B. R. Spalding were elected at Grant Pass.

—Pennsylvania. Upper Merion, member school board, Miss Anna Pechin; Mount Carmel, clerk school board, Miss Blanche Yeager; Mohnton, president, George G. Mell; Fleetwood, treasurer, Clayton K. Mentz; Conemaugh, treasurer, Carl I. Phillips; Townville, president, Frank Markley, vice-president, A. C. Barr, treasurer, F. D. Kingsley, secretary, Mrs. Grace Church; Lebanon, Sherman Deitzler; Annville, president, Oscar S. Light, vice-president, A. G. Newgate, secretary, Morris A. Meyer; West Mayfield, Albert H. Wagoner, Joseph C. Rouzer, Joseph C. Stein, Henry Schutte, Jessie M. Garoin; Pittston, secretary, Ambrose Langan; Millcreek, treasurer, A. P. Quary; Frackville, vice-president, Samuel Burchill; Salp Level, treasurer, J. M. Miller, secretary, C. H. Lehman; Hatfield township, president, Harold G. Bonekemper, vice-president, C. C. White, secretary, Andrew West.

—Washington. T. C. Van Eaton was declared by the court legally elected member of the board of education at Eatonville. The election had been bitterly contested by two factions. Mr. Van Eaton is the founder of Eatonville.

—Wisconsin. Darlington, John J. Boyle, treasurer, E. W. Pilling and Mrs. Kit Halloran elected to school board; Clintonville, elected school director, Richard Milbaur, clerk Mrs. Margaret London; Redgranite, school board clerk, Clark Berray; Whittlesey, members, Gus Rerman, Fernand Brandner, clerk, Paul Schmidt; Roxbury, school director, John Schmutz, treasurer, Herman Zimmerman; Waupun, president, Dr. E. T. Clark; Mayville, school director, John A. Thiel; Cudahy, president, Paul Miller; Tomah, treasurer, Carl Giesler; Greenbush, treasurer, T. Henry Thackray; Horicon, school-board member, E. A. Kunde; New Holstein, member, N. H. Edens; Fond du Lac, E. W. Gebhardt, treasurer; Ruchford, William Haldt, treasurer.

—T. C. Rowley was elected chairman of school district No. 17, Douglas, Wyo. H. R. Daniels was chosen president of the Converse high-school board.

—At Berkeley, Calif., the board of education elected Fred S. Stripp as its president.

—Thomas R. Cox was chosen a member of the Englewood, N. J., board of education.

—Dr. L. C. Ogle of Etowah, Tenn., was unanimously elected a member of the county board of education.

—The newly elected members of the Coffeyville, Kansas, school board are Dr. S. A. Brainard and J. N. Moon.

—A. B. Way of Petaluma, California, was elected president of the county board of education.

—G. J. Moisan was elected to a five-year term for school director at Gervais, Oregon.

—Jacob Lantenschlager and J. C. Alexander are the new members of the school board of Orchard, Nebr. The new board organized by electing J. E. Sexton, president; F. D. Strope, secretary, and J. C. Alexander, treasurer.

—The school election in Albert Lea, Minn., resulted in the selection of Peter F. Mortenson and O. K. Hellie.

—The school board of Sisterville, W. Va., elected the following officers: President, J. H. Thornton; secretary, W. G. Maxwell; member library board, Mrs. Walter R. Reitz.

—The Yaeger, W. Va., school board elected H. M. Harman as its president. The other members of the board are H. S. Short, A. R. Kennedy, and J. L. Kennedy, secretary.

—Oregon. J. B. Atherton was elected a member of the Ontario school board. Earl Bull was chosen clerk of the board. In the Rainier district, G. O. Clement was elected to the board. Fred W. Hermann was reelected clerk. J. Wylie Dalton was chosen director and David F. Cook, clerk, at North Powder.

—Michigan. D. Edward Beach and E. P. Steiner were elected members of the school board at Chelsea.

—Charles A. Johnson, E. R. Copple, and Judge C. H. Neal, members of the Okanogan, Washington, school board, visited a number of the new school buildings in the Yakima valley.

—Rev. William Hesse and Thomas Sineo are the newly elected members of the school board at Opequon, Berkely county, W. Va.

—W. F. Coleman heads the school board at Pine Bluff, Ark., for another year. L. E. Bassett was reelected secretary. The other members of the board are Mrs. Ida M. Toney, F. G. Bridges, E. W. Phillips, R. R. McIntyre, and J. H. Means.

—The school board at Monett, Missouri, has reorganized with the election of Dr. P. H. Ferguson as president; Mrs. E. Mitchell, vice-president, and Mr. W. E. Spilman, secretary.

—Daniel W. Pfaffenbach is the new member of the Watertown, Wis., board of education.

—Harold Lindahl and A. D. McPherson are the newly elected members of the school board of Iron River, Mich.

—The board of education at Whiting, Ind., has reorganized with the election of Mr. T. S. Boyle as president; Mr. John Salapski as treasurer, and Dr. O. E. Bransky as secretary.

—The board of education at Ferndale, Mich., has reorganized with the election of Mr. Wm. J. Norton as president; Mr. Lewis Walton as vice-president; and Mr. G. A. Damon as secretary. Mr. C. A. Colby is the new member of the board.

—Dr. Paul Baldwin has retired as a member of the board of education at Kennett, Mo. Dr. Baldwin had been a member of the board for eighteen years and during the greater part of that time had been president. Mr. J. A. Hemphill has been elected to succeed Mr. Baldwin as president.

—Mr. C. W. Vandersluis and Mr. O. H. Erickson have been reelected to the school board at Bemidji, Minn., for periods of three years each.

—Oregon. Mr. E. S. Downing was elected and Mr. H. G. Kern reelected, as school directors at North Bend. The other members of the board are William Vaughn, chairman; Charles Cavanaugh, H. E. Burmester, and William Laird. At Oswego, Mr. William Hyslip was elected school director and Mr. John Beekner was reelected clerk. Mr. D. O. Weaver was elected for a third term as a member of the Reedsport school board. The other members

(Concluded on Page 127)

For Limitless Years of Service!

HOW many years of service will Haas Flush Valves render? Nobody knows the sum today, for numerous Haas installations made more than thirty years ago are still functioning perfectly, despite the constant use and frequent abuse to which they are subjected in schools and other public buildings! Still functioning perfectly — with a very minimum of upkeep cost during all those years!

There is a Haas installation near you — perhaps one of these early installations — that you can and should inspect. See for yourself why Haas equipment is the choice of conscientious school-board officials and well-informed architects the country over. Let us tell you where you'll find Haas Water Closets and Haas Flush Valves on duty now!

WATER CLOSETS **Haas** FLUSH VALVES

Haas Flush Valves have no complicated mechanisms, no small ports to clog, no needle-point adjustments, no metal-to-metal contacts that cause rapid wear. They are internally self-cleansing in all waters. Afford instant adjustment and positive control of flow and after-fill. Guaranteed five years.



SIMMS SCHOOL
HUNTINGTON W.VA.

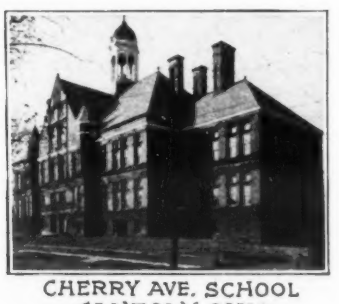


U.S. GRANT SCHOOL
YOUNGSTOWN, OHIO





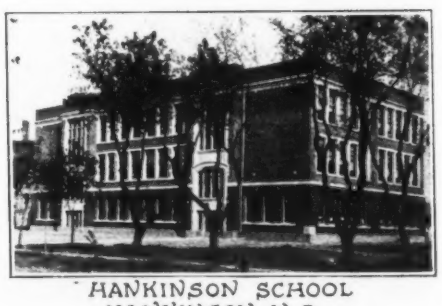
GREENFIELD HIGH SCHOOL
PITTSBURGH, PA.



CHERRY AVE. SCHOOL
CANTON OHIO.



JACKSON GRADE SCHOOL
DAYTON - OHIO.



HANKINSON SCHOOL
HANKINSON, N.D.



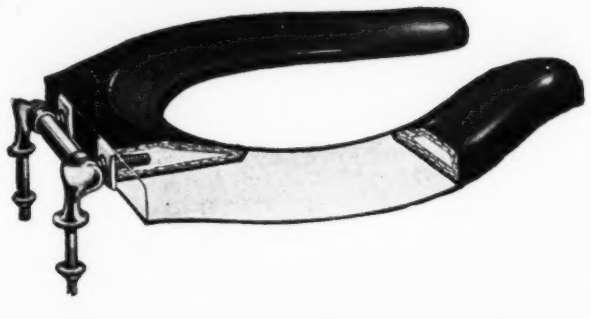
JEFFERSON SCHOOL
DAYTON OHIO.

PHILIP HAAS COMPANY

Dayton **ESTABLISHED 1896** **Ohio**

Catalogues Sent to School Officials and Architects Upon Request

Evernu
Everlasting Hard Rubber
Seats
Patented



They'll Still Be Just Like New 30 Years From Now

Evernu toilet seats simply cannot wear out or become shabby looking. They are molded in one piece of hard rubber by the patented Evernu process which makes them practically indestructible.

That's the reason they are so widely chosen for original and replacement installation in schools. There's no end to their economy.

Then, too, as a sanitary measure the installation of Evernu seats is worth considering. The smooth, seamless surface may be cleansed easily with alcohol. It is guaranteed not to warp, chip or crack.

And, best of all, you can have all these Evernu advantages at a remarkably reasonable price. Have your architect specify Evernu.

Important Public School Installations of Evernu Seats Include Those at:

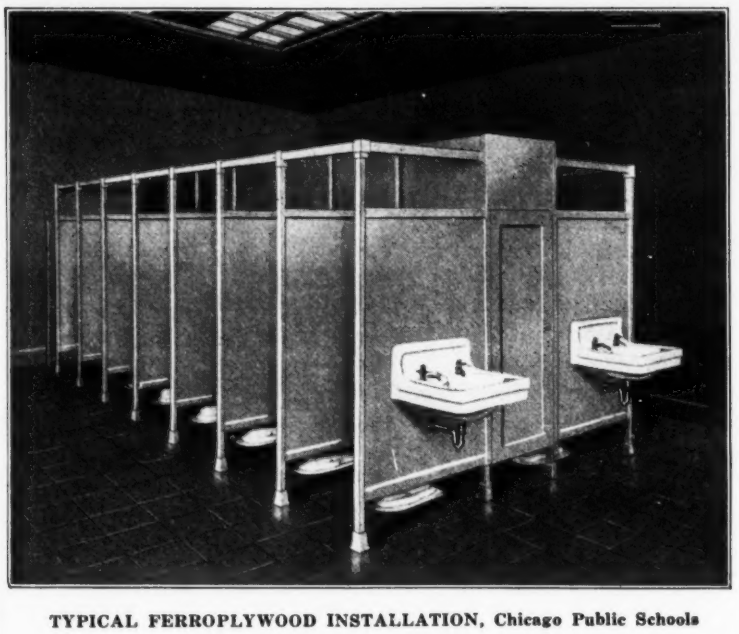
Chicago, Ill.	Long Beach, Calif.
New York, N. Y.	Pasadena, Calif.
Los Angeles, Calif.	South Bend, Ind.
San Francisco, Calif.	Columbia, S. C.
Indianapolis, Ind.	Terre Haute, Ind.
Evansville, Ind.	Baltimore, Md.
Harrisburg, Pa.	Dayton, Ohio.
Kansas City, Mo.	Cincinnati, Ohio.
Seattle, Wash.	Oakland, Calif.
Baton Rouge, La.	Amarillo, Texas.
Tacoma, Wash.	Richmond, Va.
Philadelphia, Pa.	Toledo, Ohio.
Cleveland, Ohio.	San Antonio, Texas.
Mobile, Ala.	Houston, Texas.
Dallas, Texas.	St. Joseph, Mo.
Shreveport, La.	Salem, Oregon.
Pine Bluff, Ark.	Winston-Salem, N. C.
Eugene, Oregon.	Raleigh, N. C.

The Never Split Seat Company

Founded 1905 Dept. 133, Evansville, Ind., U. S. A.

The Largest Manufacturers of Toilet Seats in the World

FERROPLYWOOD



TYPICAL FERROPLYWOOD INSTALLATION, Chicago Public Schools

The Metal Partition that is Different

SANITARY
No open seams or butt joints.
No dirt catching mouldings or channels.

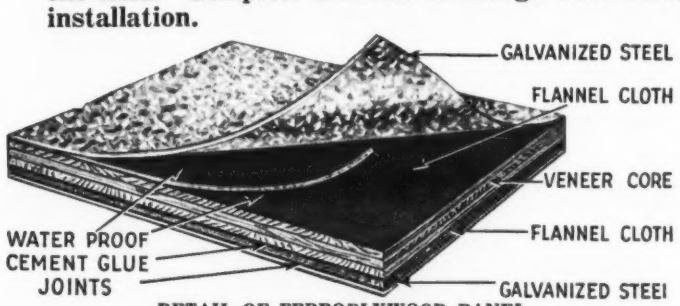
STRENGTH
Partition and door panels
¼ inch thick material.
Rigid interlocking panel and door construction.
All joints welded and homogeneous.

SOUND PROOF
No metallic sound or buckled panels.
(Note detail of FERROPLYWOOD panels.)
Kalamein sound proof door stiles with ¼ inch thick panel.

HARDWARE
Heavy universal adjustable hinges securely bolted through post. Heavy nickel plated Brass Door Bolt and Pull.

FINISH
The easy to clean rust resisting, and flexible finish required for large panel surfaces reduces maintenance cost to a minimum.

ERECTION
No special labor required, no drilling or cutting in the field. Complete erection drawings with every installation.



DETAIL OF FERROPLYWOOD PANEL

COMPLETE LAYOUT AND PLANNING SERVICE
Send rough layout or blue prints of your plumbing requirements.
WRITE FOR CATALOGUE No. 10.

Litterer Bros. Manufacturing Co.
CHICAGO 3022-3032 North Rockwell Street ILLINOIS

Representatives in All Principal Cities

For the Requirements of Every School



Schools everywhere have found that Rundle-Spence Vertico-Slant Fountains provide the most practical and sanitary drinking facilities. Two of the more popular kinds for "school requirements" are pictured here.

Lips can't touch the R-S nozzle—the contamination arising from lip-contact is automatically eliminated. Besides, R-S "health bubblers" take up little space, check the waste of water and give continuous service for many years.

The R-S line includes Sanitary Drinking Fountains, Bath and Plumbing Fixtures and Supplies. Write for catalog with prices, specifications, and complete information.

RUNDLE-SPENCE MFG. CO.
51 Fourth St., Milwaukee, Wis.

RUNDLE-SPENCE



C 92

Handsome vitreous china one piece fountain. Combines all the conveniences of the vertical stream with the special slanting stream feature. Glass or cup may easily be filled from it.

C 147



A pedestal fixture of galvanized pipe with extra heavy vitreous China bowl and vertico-slant stream. An extra strong fountain for the playground.

(Concluded from Page 124)

of the board are James Ford, Jr., and H. L. Edmunds. Mrs. Henry Sagaberd has been named clerk. C. K. Loe and E. J. Geer were elected for three years on the Silverton board. At Philomath, Clay Tatum was elected school trustee. C. W. Mumford was chosen school trustee at Wallowa. E. A. Searle was reelected clerk. Frank Wortman and Lee Peters were reelected school trustees at McMinnville. A. W. Cameron was made chairman and P. P. Olds was reelected clerk. C. S. Cheshire was elected trustee and S. A. Miller clerk at Milton. C. J. Edwards and Ira C. Smith were elected at Tillamook. The other members of the board are H. T. Botts, Ira W. White, and Rev. W. G. Lienkaemper. O. C. Hobbs was elected at Wheeler, and A. D. Thompson at Nehalem.

—Mr. Owen J. Hinterleiter was elected treasurer of the school board at Topton, Pa.

—John Beck will succeed P. J. Latham as a member of the Benton, Ill., school board.

—John W. Lewis, acting director of business management of the public schools of Baltimore, Md., has been appointed permanently to the position, at a salary of $5,000 per year.

—Miss Bertha Mandel, who was on June 8 appointed assistant director of reference, research, and statistics of the New York City board of education, died July 8 following an operation. Miss Mandel was the only daughter of Associate Supt. Edward Mandel. She was graduated from Hunter College in 1912 and immediately entered upon a teaching career. Miss Mandel had taught in the DeWitt Clinton High School until her election as assistant research director, and was one of two women to be placed on the original eligible list for examiner several years ago.

SCHOOL-BOARD ELECTIONS IN MICHIGAN

—Maple Rapids, H. A. Annis and Mrs. Pearl Brown; Clinton, township district 1, Paul Shanler and Helena Marquardt; Portage township, district 1, Mrs. Charlotte B. Ferris and Dr. Frederick C. Rungle; Owosso, Fred G. Ward, A. E. Osmer, Fred Randolph; Calumet township, district 2, Charles Tossoa; Allouez township, Fred Messner, Fred Peterman; Houghton, James T. Fisher, R. J. McClelland; Houghton, district 3, Robert McIntosh, A. F. Heid; Adrian, C. E. Baldwin, Fred Westage; Dowagiac, Charles Mosher, E. Roat Fitch; Hamtramck, Stanley L. Wozniak, Henry Karwoski, Stephen S. Skrzycki, Stanley Sledzinski; Three Rivers, Walter J. Thomas, P. L. Vail; Hancock, George H. Roberts, A. J. Close; St. Joseph, Wm. E. Hatch, Fred W. Tebbe, Fremont Evans; Benton Harbor, Dr. E. R. Taylor, Willard J. Banyon; Watervliet, Frank C. Gilchrist, A. B. Horton; New Troy, A. E. English, Jack Freeman; Britton, Harlan Keran, C. F. Brown.

Iron Mountain, Dr. Geron Frederickson, Dr. Leslie Coffin; Lawrence, Dr. A. A. McNabb; Ithaca, Lynn T. Miller, Howard A. Potter; Allegan, Harry Perriog, Herman Vaupell, M. H. Mutchler; Fremont, Milo A. White, Dr. Willis Geerlings; Clare, Dr. A. E. Mulder, George J. White; Bellevue, A. G. Butler, Earl Kelly; Brooklyn, Dr. F. H. Austin; Grand Haven, Arthur B. Elliott, Henry V. Bolt; Bronson, Dr. J. A. Sommer, C. F. Moon; Sturgis, Charles Caye, H. Glen Kerchner; Pentwater, A. W. Hanson, Mrs. Ida E. Jeffries, I. C. Harwood; Howell, Herbert R. Gillette, Harry L. Williams; New Buffalo, Thomas Bentner, Harry Meyers; Niles, John D. Elder, P. A. Hadsell; Bad Axe, James Baldwin.

The following were elected officers of the boards of education in the cities named: Saugatuck, president, L. R. Brady, secretary, Mrs. Grace Simpkins; St. Joseph, president, R. E. Barr; Kalamazoo, president, John S. Rockwell; Hazel Park, president, Mrs. Lottie Thibos, vice-president, Frank J. Koukol, secretary, Sam Durbin, treasurer, A. L. Carlson; Fenton, president, W. R. Davis, secretary, M. E. Whiteman, treasurer, C. J. Phillips; Huntington-Woods, president, Leo T. Daggy, secretary, Franklin, L. Lord, treasurer, Charles T. Heimstreet; Escanaba, James C. Baker, secretary, L. M. Schemmel, treasurer, Dr. R. M. Banks; Pontiac, president, Otto Sachse.

MR. BABB BECOMES DIRECTOR OF BUSINESS AFFAIRS AT LYNN, MASS.

Mr. Ralph W. Babb was recently elected assistant superintendent of schools in charge of the business affairs of the public schools of Lynn, Mass. Mr. Babb was elected to the position upon the reorganization of the administrative staff following a comprehensive survey of the school system by Drs. Strayer and Engelhardt of Teachers College, Columbia University.

Mr. Babb has held several positions in the Lynn school system during the past twenty years and has been active in the development of industrial and vocational education. He began his teaching career as a manual-training teacher and later became principal of the Lynn evening school. Later he became supervisor of industrial arts in the junior high schools and director of continuation schools. For the last three years Mr. Babb has been in charge of the business end of repair and equipment work of the Lynn schools, and also acts as a teacher-training instructor for the vocational division of the Massachusetts board of education.

Mr. Babb has studied at the Massachusetts Institute of Technology summer school, at Northeastern University school of law and Boston University school of education, and is president-elect of the Vocational Education Society of Boston.

CHATS DURING RECESS

Mrs. Susan M. Dorsey, superintendent of the Los Angeles, Calif., schools, was hailed as the "grand old lady" at the Seattle N. E. A. convention. An enthusiastic writer said of her:

"She looks like lavender, old lace, fragile china, as she walks around with her snowy white shawl, drawn over her shoulders. But just let Mrs. Dorsey sit in on a committee meeting—she flares up with the alertness, the swiftness of a twenty-year-old school teacher—but, oh, the experience and the love of her profession, that flow into her words."

A newspaper item: "To hear many school teachers talk shop, it would appear that theirs was the dullest and dreariest and most uninspiring job in the whole world. There are, however, a few who sanely view the profession as pretty fair pay and short hours with a long vacation, and they work at their trade as though it were more than humdrum slavery."

News Item: As for the pledge required of teachers in one North Carolina community that they do not fall in love, our ardent wish is to see the chairman of the school board there lose his heart to one of his pledge-signing school ma'ams.

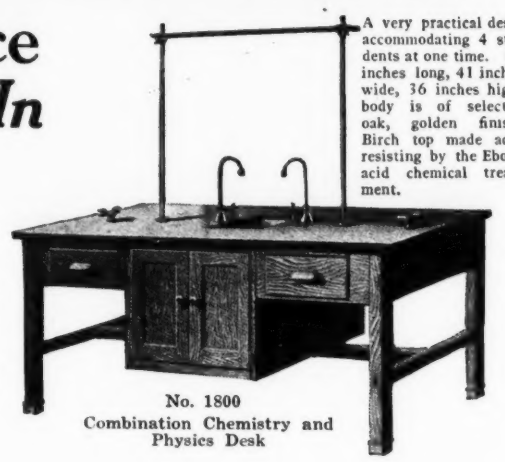
News Item: Men who smoke and women who paint and wear "extreme" dresses will find no place in Muskogee county, Oklahoma, next term if Miss Etta DeLay, county superintendent, has her way.

WIESE

Laboratory Furniture
Made in Manitowoc

Unparalleled Performance Assured by Wiese *Built-In* Excellence

Measured by any conceivable laboratory test, Wiese equipment is *first* outstanding in performance. Rigid classroom requirements serve only to accentuate the perfection that is typical of Weise equipment. Built into every product is a quality that reflects the skill of its craftsmen, the specialized experience of its entire organization.



A very practical desk, accommodating 4 students at one time. 69 inches long, 41 inches wide, 36 inches high, body is of selected oak, golden finish. Birch top made acid resisting by the Ebonacid chemical treatment.

No. 1800
Combination Chemistry and Physics Desk

Send for our special free Catalog No. 30

WIESE LABORATORY FURNITURE CO.

ENGINEERS AND BUILDERS

Standard or Built-to-order Educational and Technical Furniture for Physics, Agriculture, Biology, Household Economics and Manual Training.

FACTORY: MANITOWOC, WISCONSIN. SALES OFFICES IN PRINCIPAL CITIES.



TEACHERS AND ADMINISTRATION

LEWISTON TEACHER-CONTRACT RULES

Among the rules adopted by the Lewiston, Montana, board of education affecting the employment of teachers is the following:

1. A married woman will not be employed unless the family by reason of husband's disability is dependent upon her. Her employment will be subject to the following conditions:

a) Any married woman who is employed while her husband is physically incapacitated shall surrender her contract when her husband enters into active business or professional relations thereby giving evidence of his ability to support the family; provided, the teacher may continue to the end of the term if not more than three months remain. This condition shall not apply to teachers now employed unless the condition was made at time of employment.

b) Any unmarried teacher shall upon entering into a marriage contract resign her position as teacher at end of the semester.

THE BRIDGEPORT TEACHING-DAY PLAN

A plan whereby the school year will be divided into four terms, each term to be followed by a vacation period of one week, was presented by Superintendent Carroll D. Reed to the board of education of Bridgeport, Conn. The newly adopted plan incorporates 72, 35, 39, and 39 days as the units which will comprise the group number annual teaching days. Through the schedule the Easter recess will be eliminated and school will remain in session two additional June days.

School opens September 7; holidays, Columbus day, Wednesday, October 12; teachers' convention, Friday, October 21; Armistice day, Friday, November 11; Thanksgiving, Thursday and Friday, November 24 and 25; fall term ends Friday, December 23 (73 days).

Winter term begins Monday, January 2; new semester begins Monday, January 30; winter term ends Friday, February 17 (35 days).

Spring term begins Monday, February 27; holidays, Good Friday, Friday, April 6; spring term ends Friday, April 20 (39 days).

Summer term begins Monday, April 30; holidays, Memorial day, Wednesday, May 30; summer term ends Friday, June 22 (39 days); total number of days, 186.

TEACHERS AND SCHOOL ADMINISTRATION

—The Peoria, Ill., school board reduced the summer-school expense by shortening the term and reducing salaries.

—Chicago, Ill. The board of education has approved Supt. William McAndrew's plan providing for sabbatical leaves for teachers. The schedule which goes into effect immediately provides that teachers in the service for seven consecutive years may take one or two semesters' leave of absence for purposes of travel, study, or investigation of school systems.

The rules provide that not more than two teachers may be absent from a given school at one time, and also that preference be given to those with the longest and most satisfactory service records. Proof must be given upon return to service that the teacher has carried out the program approved by the board.

—Marriages were responsible for half the resignations of teachers in the Detroit schools last year, according to Mr. H. J. Kaufman, director of the department of statistics and publications. Although the percentage resigning for matrimony has declined during the last six years, the percentage of resigning teachers has steadily decreased in this period.

Mr. Kaufman points out that resignations of teachers becomes an expensive proposition when it is shown that eighty per cent of those resigning in the last six years had taught less than ten years.

—As an incentive to teachers to do exceptional work, the board of education of Schenectady, N. Y., has awarded to nine teachers $100 each, accompanied by a letter of appreciation.

—Trial for neglect of duty is faced by teachers in the public schools of New York City who absent themselves from school in order to marry or to take a wedding trip. Such action is regarded by the school authorities as inexcusable and a neglect of duty.

—The towns of Shrewsbury, Boylston, and West Boylston, Mass., have discontinued the employment of married women teachers. Under the rule, teachers now employed will be continued in service, but no new ones will be appointed.

—San Francisco, Calif. The board of education has introduced a policy formerly carried out only by universities in providing for an exchange of high-school teachers with other cities. The first exchange to be made will be the instructor of English at the Polytechnic High School, who will go to New Orleans, the instructor at that place going to San Francisco.

Propose a Change in the New York Pension System

The New York state legislature will take action at its next session on a bill permitting New York City teachers who have resigned after long years of service, to return to the system with their pension rights unimpaired. The proposed bill is sponsored by the teachers' retirement board, which has held up a number of applications for reclassification pending the results of legislative action.

Under the existing rules, all teachers who were not in the system in 1917, when the pension system went into effect, and all who resign and do not return within a year must be classified as "new entrants," regardless of the length of service prior to resignation.

The situation is causing hardships among returning teachers, some of them with service records of twenty years or more, who come back after an absence of two or more years, to find that they are classified as new entrants. As such, their pension premiums are increased from the former three to six per cent to 25 or 30 per cent of their salaries. The large increase in rates is due to the fact that pension rates are calculated on the actuarial basis, and increase with the age of the entrant, the same as insurance premiums do.

As a temporary method of preventing the recurrence of such cases, the pension board has warned all teachers who resign that they must return within a year if they do not want to be classed as new entrants upon their return to service.

101 YEARS OF MANUFACTURING EXPERIENCE



This is the H-W Eclipse Adjustable Desk Set, a strong and easily adjusted unit built for service.

The H-W line of School Seats is most complete and contains many desirable models.

A SIMPLE, YET POSITIVE ADJUSTMENT!

HERE is a strong, rigid school desk with a wide range adjustment that is simple, yet positive. The wedge-chair adjustment and the vise-clamp adjustment for the desk cannot possibly loosen or work down. If you are looking for a strong, easily adjusted desk with nothing to break, get out of order, or cause you trouble, this Heywood-Wakefield Eclipse Adjustable desk set will fill your requirements.

More than 10,000 sets of this type are in use in the Panama Canal Zone and over 50,000 in the city of Boston alone. Surely such tremendous and continued orders amply prove that this Heywood-Wakefield desk is built to serve long and satisfactorily. May we tell you more about it?



The advantages of this desk and many other school units are described in our new School Furniture Catalogue. Write for a copy.

Heywood-Wakefield
REG. U.S. PAT. OFF.



Baltimore, Maryland 113 West Conway Street
Boston 45, Massachusetts Winter Hill
Display Floor, 174 Portland Street
Buffalo, New York Wells and Carroll Streets
Chicago, Illinois 2653 Arthington Street
Display Floor, 439 Railway Exchange Building
Kansas City, Missouri 1310 West 8th Street
Los Angeles, California 801 East 7th Street
New York, New York 516 West 34th Street
Philadelphia, Pennsylvania 244 South 5th Street
Portland, Oregon 148 North 10th Street
San Francisco, California 737 Howard Street
St. Louis, Missouri 6th and O'Fallon Streets



High-School Office Administration

(Continued from Page 50)

The directory card (Fig. 2) is a combination of the best features of a number of such cards. This card may be designed to fit in the pocket of a visible cabinet, showing the pupil's name, address, phone, and homeroom on the visible line.

It is recommended that the program or directory card be combined with the student's permanent record card. The latter record contains more or less confidential information, and

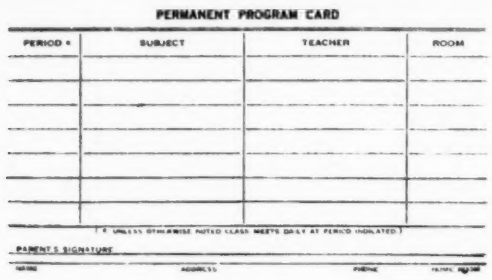


FIG. 2.

This card is filed in the pocket of a visible file. The reverse side of the card is used for enrollment data, such as age, course taking, mother's name, father's occupation, etc.

it should not be open to inspection by everyone who may have occasion to inspect the directory card. Moreover, the directory card must be renewed each year, while the student's record card should be designed to contain his entire high-school history.

The separate directory card will locate a pupil at once. It relieves the principal and his clerks of interference with the more confidential records. It is rapidly becoming the general practice to have such a directory record, and to place it where it is readily available to all who have occasion to consult it.

Registration by Class Tickets

In the registration plan described above, a large program sheet is used as a means of assigning pupils to classes. Many schools, particularly those which are not large enough for such a detailed homeroom organization, use the class-ticket plan of assigning students to classes. With this plan the pupil fills out his choice-of-subjects card in the spring, in duplicate. One copy is kept by the student, and one is turned in to the principal's office. The selection cards are then analyzed as in the Trenton plan.

Selection cards should always be filled out also by pupils who are to enter the high school for the first time. These cards can be filled out on the advice of the grade teachers, but the high-school principal can do some of his most effective work by personally visiting and talking to each graduating grade room at the time the selection of subjects is made. If the principal can present to each pupil some useful facts bearing on the high-school courses, he will do much toward selling the high school to the graduating grade students.

Class Tickets

For each subject listed on each assignment card, two class tickets are made out in the principal's office. Class tickets are then arranged in packs, one pack for each class, and are ready for the actual registration of pupils. A typical class ticket is shown in Figure 3.

As a pupil registers for a class, two tickets are withdrawn from the pack for that class, and the pupil's name is entered on each ticket. The number of class tickets remaining in the pack shows how many pupils may yet be registered for that class. One of the class tickets withdrawn for each registration is used in the principal's office in preparing the official class lists. This ticket is kept by the office only until the permanent program cards are made out.

The other class ticket is sent to the teacher with the official class list. The teacher may use

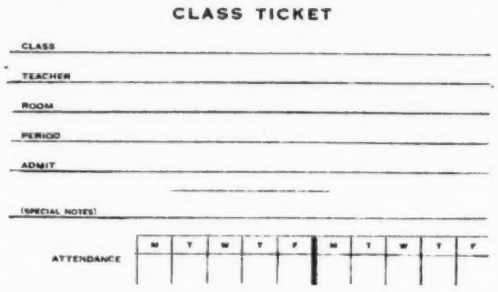


FIG. 3.

The class ticket serves as a temporary attendance record as well as a certificate of admission to class.

the class ticket as a temporary attendance and grading record. This is a great convenience, since it prevents the premature making out of record books by the teacher.

With the class-ticket plan no additions can be made to any class after the first of the year unless a class ticket is brought by the new student. And if a student is dropped from a class, he must return his class ticket for that class to the office, in person.

Departmental Aid in Registration

In the large high school the best registration procedure seems to be similar to that of the Stadium High School of Tacoma, Washington. Here the heads of departments submit to the principal schedules of tentative programs, each for his own department. These programs are carefully correlated, mimeographed copies are made, and all teachers are supplied with a complete program of all departments.

The relief to the principal is obvious, and the placing of a certain amount of program responsibility on the department heads is an excellent administrative device. The department head is certainly in a position to anticipate program requirements for the coming term, and he appreciates the opportunity to aid in providing the schedule for meeting these requirements.

The entire teaching force of Stadium High School aids in making out the programs of the individual students. Every teacher has some particular duty. There are checkers, college requirement experts, and committees to deal with unusual cases. The actual registration work is done on Friday and Saturday just before the opening Monday in September, and also just before the opening Monday of the second semester in February.

An especially interesting feature of the enrollment procedure at Stadium High School is the back of the card which is used by the pupil for the selection of subjects. The form used is shown in Figure 4. The principal of the Stadium High School says of this form: "We find this a valuable sidelight and reference when checking the pupil's credits in the office. Furthermore, it causes the pupil to keep a fairly accurate check of his own worth. We do not regard it as necessarily accurate, but where the pupil's

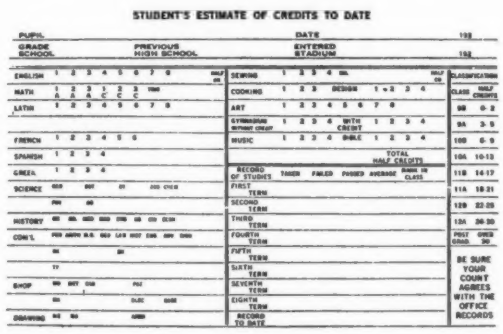


FIG. 4.

This is the back of the card used for the advance selection of subjects. It serves as an excellent check on the student's understanding of his school record.

estimate and the office record vary we regard it as a situation needing a conference so that there may be a complete understanding of pupil and office as to the exact number of credits earned."

The Selection of Teachers

Some schools allow the pupils to suggest on their selection cards the teachers they prefer for the next semester, and so far as possible try to place the pupils with the teachers of their choice. Other schools assign the pupils to teachers without permitting the pupils to have any voice in the matter.

The most generally approved method avoids each of these extremes. The pupil does not suggest his preference for teachers on his assignment card, but on registration day he is given a copy of the schedule, showing class hours and teachers in each subject. He is then allowed to choose for himself the hours of recitation and the teachers he wishes, subject, of course, to change in case a class is filled before his registration is recorded, and subject also to the final approval of his advisor or of the principal.

Conclusion

In order to start the school off smoothly on the very first day of the term, the work of registration must be done in advance—so far in advance as possible. Every plan we have mentioned here, in fact every plan which is really succeeding in starting school on the first day, has advance selection of classes, advance assignment of rooms and teachers, advance programs for the individual pupils, advance class lists for every class—all in readiness for the first day of school, and all carefully and deliberately drawn up. There is no last minute rush. Supplies are ready, probable difficulties have been anticipated, books are available.

In every such school there is a resourceful, far-seeing principal who has personally devised and set up the registration procedure. He realizes that a smoothly operating school on the first day means that he has gone a long ways toward being a successful administrator, and he pays careful attention to every detail of the registration plan.

But the registration plan alone will not make the school administration a success. It must be backed up by effective record-keeping methods, by an absolutely reliable attendance procedure, by strict and careful student accounting.

PERSONAL NEWS

—Dr. Guy Potter Benton, president of the University of the Philippine Islands, died June 29, at the age of 62. Dr. Benton was at one time superintendent of schools at Fort Scott, Kansas, and later was connected with the state education department, and with Baker University at Baldwin City. He was president of Upper Iowa University and from there he went to the presidency of Miami University, and later to the University of Vermont. In 1921 he accepted the presidency of the University of the Philippine Islands where he remained until he was taken ill and was forced to relinquish his work. Dr. Benton was a man of exceptional administrative ability and he had a rare variety of opportunity to exercise it.

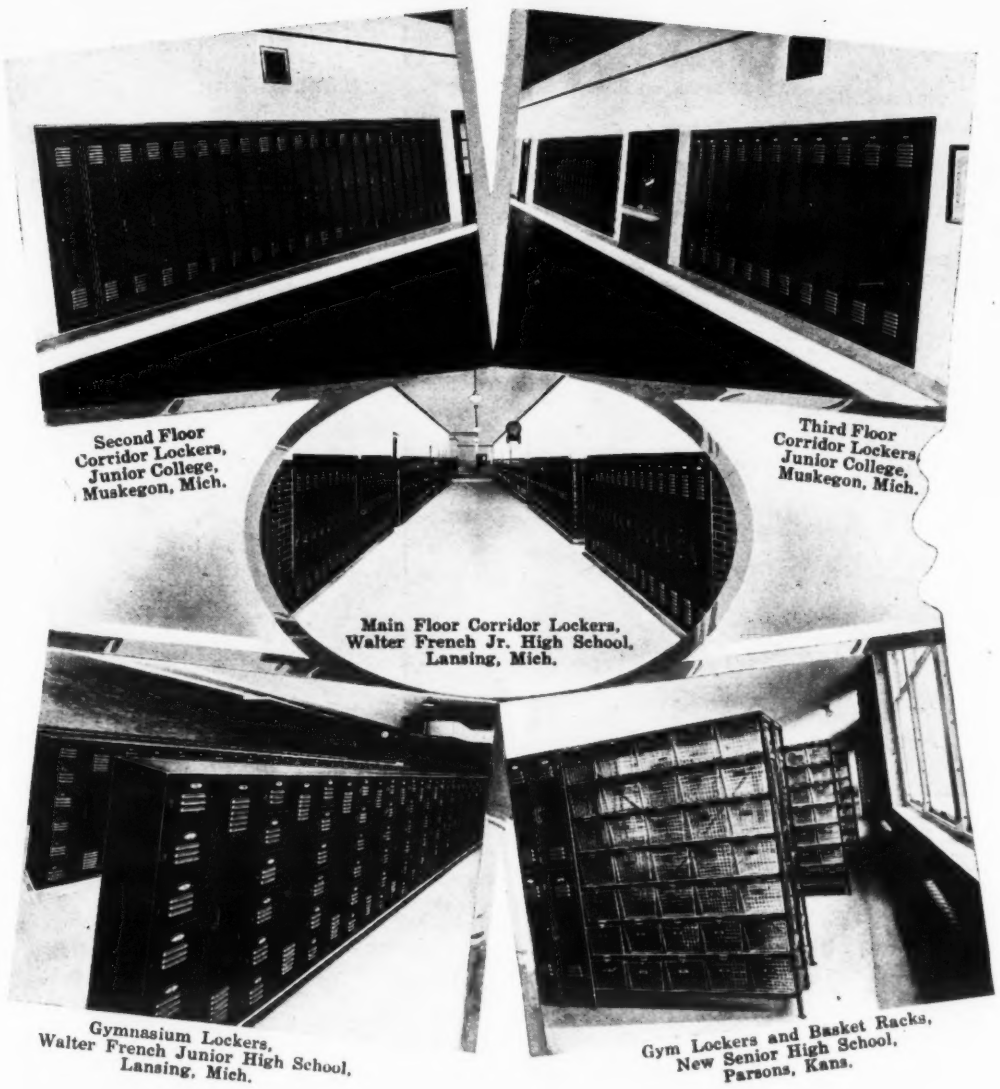
—Mr. James A. Koontz, superintendent of schools of Joplin, Mo., recently summed up the school situation of his city in a report unprecedented in that city. In the last two years Joplin has started a school-building program which is one of the most complete in Missouri. One of the improvements inaugurated by Supt. Koontz is a health improvement campaign.

The annual school-board convention for Lincoln county, Wisconsin, was held at Merrill. George Dick, state supervisor, spoke on the new laws enacted by the last legislature. Dr. V. A. Guder spoke on "Health Problems for School Boards." Other speakers were Miss Ethel Peterson, county superintendent, E. W. McCrary, principal, and Marian Blatchley, supervising teacher.

The speakers at the school-board convention held at West Bend, Wis., were Prof. W. C. Hewitt of Oshkosh, George S. Dick of Madison, and Prof. R. A. Gordon of the University of Wisconsin.

DURABILT STEEL LOCKERS

Dependable, Decorative and Durable



Gymnasium Lockers, Walter French Junior High School, Lansing, Mich.

Gym Lockers and Basket Racks, New Senior High School, Parsons, Kans.

The skilled architect, when designing a school to meet the requirements of modern education, gives most careful consideration to those features that make for a permanent building, possessing adequate capacity for the present and expansion possibilities for future needs.

Just as important as the building, and deserving of as much thoughtful consideration, are the items comprising interior equipment.

Steel Lockers, are something that should be kept in mind during the preliminary stages of school building design. This is essential because lockers today are a vital part of the structure since they are placed in corridor and gymnasium walls; or set on bases in alcoves, dressing rooms, etc., where recessing may not be desired.

Durabilt Steel Lockers have proved their value in durability and efficiency in thousands of the finest schools and other buildings throughout the country.

From a construction standpoint there are no lockers better built than Durabilt because every Durabilt Locker embodies those features which experience has shown to be essential to the exact requirements of the particular service for which intended.

The finish on Durabilt Steel Lockers is attractive and lasting, and finish today is unusually important because educators everywhere appreciate the beneficial influence of harmonious color effects and beautiful surroundings on the minds and characters of pupils.

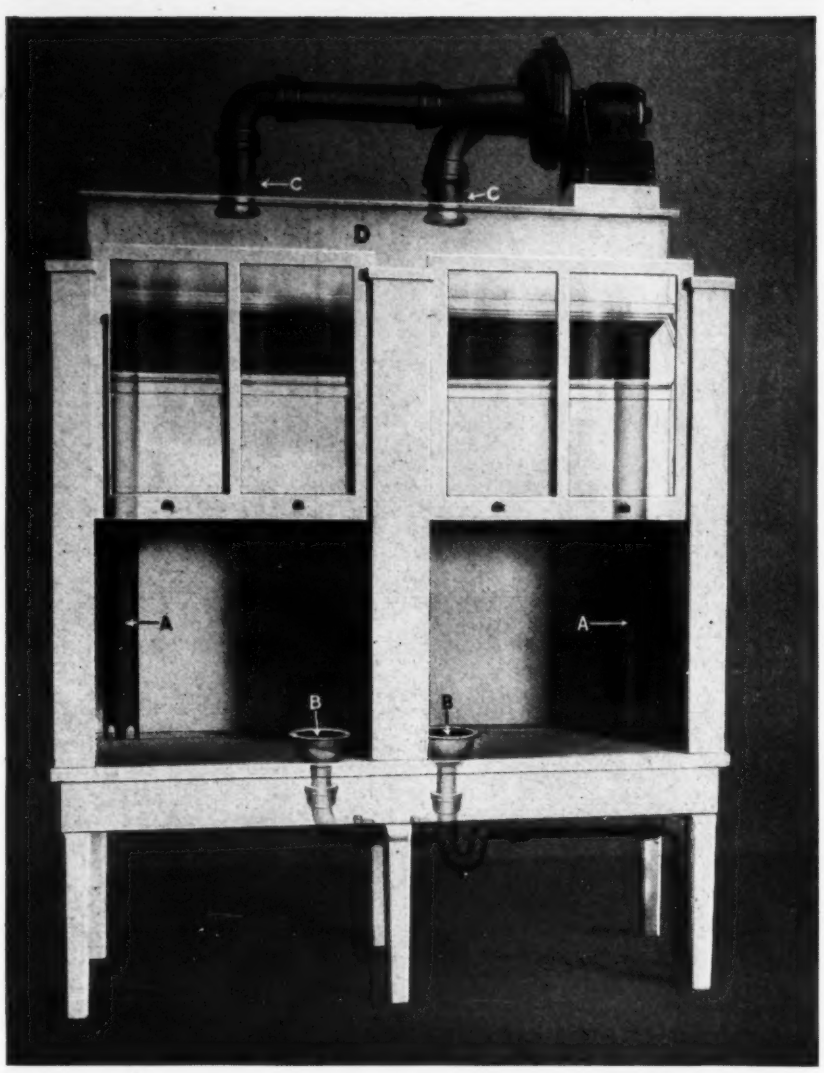
Considering their high quality, Durabilt Steel Lockers are very economical in cost. As a result of our large production we have effected numerous economies which have been passed to the ultimate user in the form of especially attractive prices.

Plan now for Durabilt Steel Lockers in your schools — we are ready to assist in the solution of all locker problems—no matter how intricate or difficult. Our loose-leaf locker handbook gives many valuable ideas and suggestions. Write for a copy and it will be sent without obligating you in the least.

"No better built than Durabilt"

DURABILT STEEL LOCKER CO.

400 ARNOLD AVE., Sales Offices in all Principal Cities AURORA, ILL.



Full Control of Acid Fumes

This phantom view of the fume hood illustrates the completeness of Duriron equipment for handling noxious laboratory fumes.

The exhaust fan draws the lighter gases from the collector box "D," and the heavier fumes from the pipes"AA." Draft is regulated by dampers "CC."

The hemispherical sinks "BB," countersunk in the hood floor, permit fuming liquids to be dashed in them instead of carrying to an outside sink. They withstand the action of undiluted acids.

The protection that only Duriron affords; the assurance that Duriron fans, sinks, pipe and fittings will give *permanent* service in school laboratories, makes them an essential specification.

Duriron is produced only by
The DURIRON COMPANY
DAYTON·OHIO

WASHINGTON CORRESPONDENCE

A. C. Monahan, Formerly U. S. Bureau of Education

High-School Laboratory Layouts

A bulletin of the U. S. Bureau of Education, is to be available early in the fall, entitled "Laboratory Layouts for High-School Science." It was prepared by A. C. Monahan, formerly of the bureau's staff, at the request of the U. S. Commissioner of Education, because of the increasing interest in science work, particularly in the smaller high schools, both public and private, throughout the United States.

The bulletin discusses the equipment necessary for effective science teaching. In its preparation several well-known authorities on high-school science assisted. These include Dr. Neil Gorgon of the University of Maryland, editor of *Chemical Education;* Mr. Louis T. Mattern of the McKinley High School of Washington, D. C., chairman of the American Chemical Society Committee on Chemistry Instruction; and Mr. E. R. Glenn, head of the science department of Lincoln School, Teachers College, Columbia University.

Department of School Attendance and Work Permits of the District of Columbia

This department, which has reorganized by act of Congress, approved February 4, 1925, is proving to be exceedingly satisfactory in its operation. Under this act there is concentrated in one office of the public-school system, the responsibility for the enforcement of school attendance, child-labor regulations, and the maintenance of a continuous, permanent school census.

The law requires the census to include all persons between the ages of three and eighteen, residing permanently or temporarily within the District of Columbia. The census is taken by a house-to-house canvass by fifteen persons who record the full name, address, race, sex, and date and place of birth. It records also the school attended by each child, or if employed, the name and address of his employer, and the address and occupation of the parent or guardian.

This information is recorded on cards 4 by 6 in. in dimensions in a permanent file.

The law requires the principal or head teacher of every public, private, or parochial school, or private teachers, to report the name and address, sex, age, and race of every child under eighteen years of age, who enrolls in or withdraws from his school. They report also changes in addresses. All of this information is listed on the child's census card. The reports from the schools are made on cards furnished by the school-attendance department. They are a different color from those used for the census record. This system has proved convenient and satisfactory.

Parent-Teacher Associations

A recent study of the extent and work of parent-teacher associations will appear in the biennial survey of education of the U. S. Bureau of Education soon to be issued. This report is of interest at this time particularly on account of a recent study of parent-teacher associations made by a high-school principal in Wisconsin and commented upon editorially in the SCHOOL BOARD JOURNAL for August.

Parent-teacher associations, under that name, have been in existence approximately 30 years; "parent-teacher" cooperation being adopted by the National Congress of Mothers, as a part of its program in 1897. In 1920 there were 38 state branches of what is now called the National Congress of Parents and Teachers, with over 200,000 members. In 1926 there were 47 state branches, a District-of-Columbia branch, and a Hawaiian branch, with more than a million men and women as active members. These do not include independent local organizations, which have not affiliated directly or indirectly with the state or national organization. The national organization holds an annual convention attended by authorized delegates from the 49 state branches. Each state branch is the representative of the national congress in the state, and is pledged to carry out the objects and policies of the national organization. The first state organization was created in New York in 1897. The second was in Pennsylvania two years later. Five states organized state associations in 1900. From then on the organization was rapid. Texas now leads with the largest number of local organizations, with California close second; Illinois, Michigan, Ohio, New York, and Missouri follow in the order named.

These parent-teacher associations do not include the school-improvement associations in several southern states which do work of a similar nature. Alabama, Arkansas, South Carolina, and Virginia have active state school-improvement associations with local branches throughout the states. Local school-improvement associations are quite common in Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, and Tennessee, but these states have no central state organization. The organizations are not always known by the name above, but if not, usually by a name somewhat similar as school-improvement league, school-improvement society, or school-betterment league.

Data are not available on the total enrollment in school-improvement associations but South Carolina alone has over 800 organizations with 22,000 members, and Virginia, where the name cooperative-education association is the legal title, has 1,850 locals with 70,000 members.

Court Decision in the District of Columbia

An interesting decision has just been handed down by Chief Justice McCoy, of the U. S. Circuit Court of the District of Columbia, relative to the responsibility for the payment of teachers. Chief Justice McCoy's decision is to the effect that the district government, and not the board of education, is responsible for salaries due public-school teachers. This decision is given together with the judgment for $1,516 against the district, awarded a teacher who claimed salary illegally withheld.

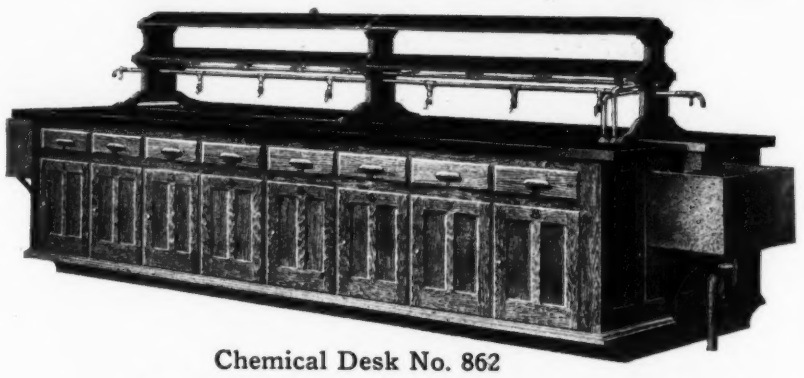
The woman who secured this judgment is a teacher in one of the high schools. She claimed pay for the period of from September 1, 1926, when she was reinstated after taking maternity leave, to March 2. The district corporation counsel contended that since the board of education employed her, she should be paid by the board, and not by the district. Counsel for the woman contended that the board had no money and did not handle any, as the school expenditures are made by the district commissioners on warrants of the board. Counsel further claimed that the school board was neither a legal nor a political entity and could not be sued for money. In this the court agreed.

Kewaunee

Chemical and Physics Desks

Every Science teacher knows the importance of properly-designed, properly-built laboratory furniture, and how much influence it exerts upon the character of work of the students.

This company is the leader in its field. Kewaunee Laboratory Furniture has been endorsed by educational authorities in every state in the United States. Its superior design, better construction, and finer finish have made Kewaunee Equipment the choice for thousands of laboratories in our best schools.



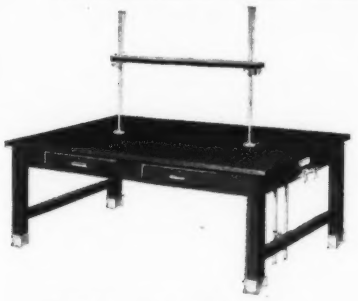
Chemical Desk No. 862

This desk, with exposed plumbing and trough, is a favorite and has been installed in many laboratories. The gas and water pipes, with convenient outlets, are placed under the lower shelf and directly over the trough. The trough is lead-lined and slopes from the middle toward the two end sinks. Accommodates sixteen students, working in sections of eight.



Chemical Desk No. 851

In this we embody the essential features of the more elaborate and expensive desks, and still supply a good, practical design at a moderate price. It is exactly suited to the average Chemical Laboratory. Accommodates sixteen students working in sections of eight.



Physics Table No. 699

Constructed of solid, selected oak, except top which is our black acid proof. Kewaunee corner construction and two inch extension on drawers.



Instructor's Desk No. 1401A

Especially designed for the smaller schools, where lack of space or appropriation will not permit the larger and more expensive desks.

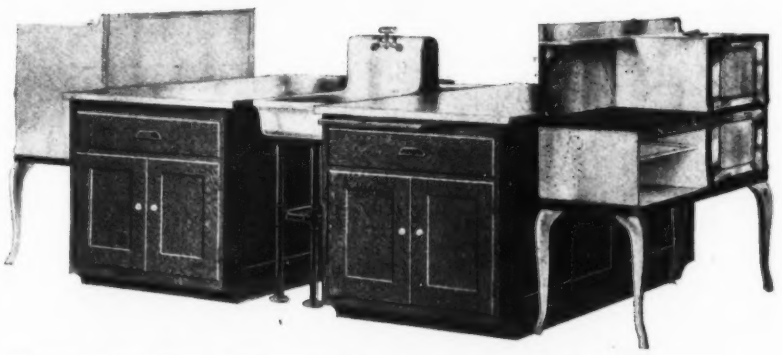
Domestic Science Equipment

One of our very important divisions is that of Domestic Science and Domestic Art. Kewaunee Desks embody every practical improvement and convenience, besides being more sightly, better finished, and far more pleasing to the discriminating taste of Instructors.

Good scholarship depends upon the appearance and utility of your equipment as well as upon the spirit of the instructor.

Kewaunee is practical, yet it possesses a decided artistic appeal.

Domestic Science Group (on right) consisting of two Domestic Science Tables, with a Sink between, and a Stove on each end.





Domestic Science Table No. 16025



Domestic Science Table No. 16030

Four Books—Each an Authority in Its Field

1. **The Kewaunee Book, over 400 pages beautifully illustrated with furniture for the teaching of the Sciences and Arts.**
2. **Supplement on Lincoln Science Desks.**
3. **The Kewaunee-Economy Book of Art and Mechanical Drawing Tables and Vocational Furniture.**
4. **Supplement on Chemical-Proof Ceramic Sinks.**

Free to interested executives. Address the home office at Kewaunee.

Kewaunee Mfg. Co.

LABORATORY FURNITURE EXPERTS

C. G. Campbell, Treas. and Gen. Mgr.

101 LINCOLN ST., KEWAUNEE, WIS.

CHICAGO OFFICE
25 E. JACKSON BLVD.

DISTRIBUTORS

Minneapolis	Kansas City	Houston	Little Rock	Denver
Lincoln, Nebr.	Columbus	Spokane	Oklahoma City	Los Angeles
Jackson, Miss.	New Orleans	Phoenix	Philadelphia	Greensboro, N. C.
El Paso	Salt Lake City	Portland, Ore.	Des Moines	San Francisco

NEW YORK OFFICE
70 FIFTH AVENUE

COLUMBIA SANITARY STEEL PADDED SEATS



COLUMBIA INDESTRUCTO TABLET ARM CHAIR AT $4.25
WITH PERFORATED SHEET STEEL BOOK SHELF 25c EXTRA



INDEKINDERCHAIR

Indestructo Kindergarten Chair. Of the same sturdy construction. Made in 11, 12, and 14 inch heights.

Per doz., weight 110 lbs.—price.....$20.00



INDESTRUCTO TABLET ARM CHAIR, slightly lighter than our No. 420 line but yet stronger than those made of wood. $3.75



Indestructo Teachers' Desks with 2 drawers @ $13.00; with 4 drawers @ $17.00; with 5 drawers @ $19.50. Send for Illustrated Catalogue.



INDESTRUCTETTE CHAIR for Teachers, Visitors, Cafeterias, or assembly halls. Not quite so strong, or as heavy, as the Indestructo above but stronger than chairs made of wood. Each, $2.85.

More than 30,000 Indestructo Desks and Chairs sold during the 30 days June 15-July 15. Most of these orders were from former customers, among which are the following:

Jacksonville, Florida	2,863
Detroit, Michigan	2,465
Beaumont, Texas	1,477
Knoxville, Tenn.	1,282
Memphis, Tenn.	700
Phoenix, Ariz.	900
Tuscon, Arizona	1,200

Each of the above has in use from 1,000 to 24,000. Orders for lesser quantities received from more than a score of other cities.



NEW LEVELING DEVICE
which is now installed without extra charge
See Price List below

COLUMBIA INDESTRUCTO CHAIR DESK

Back slats adjustable; Height and tilt of top adjustable; Top Leveling Device.

Large—$4.95; Medium—$4.80; Small—$4.65.

Dovetailed hardwood drawer A $1.50; Book Drawer with steel sides and bottom B $1.15; Swinging flush top ink well 15c.

The greatest announcement during this school generation. Send for catalogue and list of over two thousand users.



The 24 points of a perfect desk as decided by Prof. C. A. Anderson of Stanford University and his Committee of over a score of leading educators are all possessed by the Columbia. (See July, 1924, issue of American School Board Journal. A reprint will be sent on request.)

INDESTRUCTO'S POINTS.

1. Seat of proper height.
2. All corners rounded.
3. Seat saddled to fit body.
4. Seat of proper width.
5. Seat tilted higher at front.
6. Back tipped backward slightly.
7. Back curved to fit body.
8. Back adjustable in height.
9. Back of solid quartered oak.
10. Seat extends slightly under top.
11. Desk height adjustable to child.
12. Desk slant adjustable.
    11 and 12 constitute a Tilting Top.
13. Curved front feet give same strength and effect as separate support.
14. Desks easily moved for sweeping.
15. Noiseless, no hinges or swivels.
16. Arm rest extended backward.
17. Simplicity—Examine illustration.
18. Durability—Indestructible steel.
19. Finish, dull, lasting quality.
20. Flush top inkwell, noiseless, removable.
21. Box or sliding drawer.
    May be used on either side.
22. Nothing to catch dirt.
23. Pencil groove on top.
24. Top leveling device.

COLUMBIA SCHOOL SUPPLY CO.
INDIANAPOLIS, IND.

COLUMBIA SANITARY STEEL DESKS COLUMBIA SANITARY STEEL DESKS



This Year

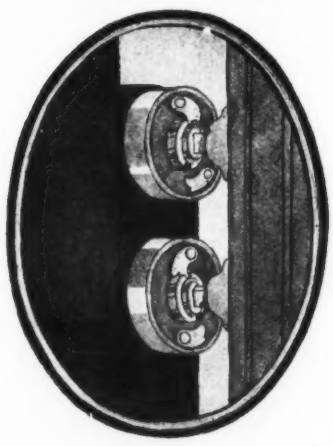
SPECIFY HARTSHORN WHEN YOU PLACE YOUR RESHADING ORDER

EVERY teacher will tell you there's nothing in the classroom more irritating—nothing that does more to distract attention—than an unruly window shade.

In choosing Hartshorn Shade Cloth mounted on Hartshorn Rollers, you are admitting to your classrooms products bearing credentials of over sixty years' standing. Since the days of the Little Red Schoolhouse, not a single black mark or condition has ever been chalked up against a shade roller with the name Hartshorn.

Specify Hartshorn Shade Cloth mounted on Hartshorn Rollers when you order equipment. They will give you trouble-free service for years to come.

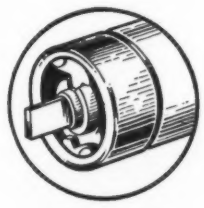
Have you seen Joanna Cloth, the new window shade fabric that sun, dirt, weather or water won't harm? Spun, woven and finished by Stewart Hartshorn. Ask for samples.



Light and air in just the proper amounts needed — light that is restful to the eyes, air that insures proper ventilation — is what this smooth-running Hartshorn Roller with No. 86 or No. 87 double brackets gives. Ideal for schoolroom use.

STEWART HARTSHORN CO.
250 Fifth Avenue, New York City

Hartshorn
SHADE PRODUCTS
Est. 1860



A shade is only as good as its roller

MADE BY THE MAKERS OF HARTSHORN SHADE ROLLERS

Why Schools Prefer the

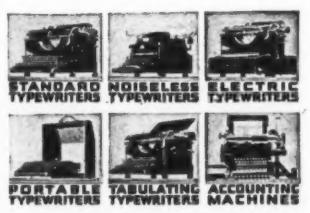


REMINGTON TYPEWRITER

THE continued demand for Remington Typewriters for instruction purposes by the business schools of America has for a long time been without a parallel in the history of the writing machine.

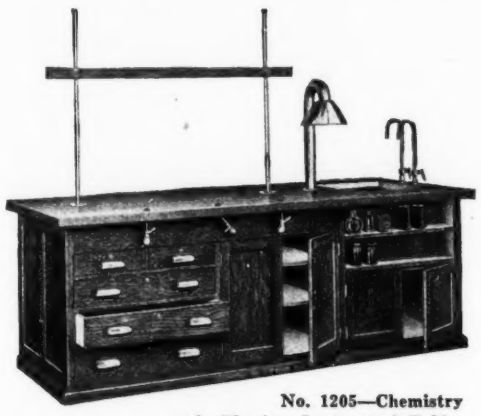
The reasons for this demand are simple and obvious. The Remington is simple, strong, and durable. It will stand the stress of school use. It is in all respects the ideal teaching machine. And the schools which employ the Remington for teaching purposes are furnishing exactly the kind of training which is demanded by the business world.

REMINGTON TYPEWRITER COMPANY
DIVISION OF REMINGTON RAND, INC.
374 Broadway *Branches Everywhere* New York



REMINGTON
TYPEWRITERS
A Machine for Every Purpose

Peterson Furniture
for Laboratory and Library



No. 1205—Chemistry and Physics Instructor's Table.

Large storage space makes it popular and practical for both Chemistry and Physics at the same time. Oak table with top of acid-proofed Birch or Soapstone. Reagent space close at hand. Two compartments at rear for tubing, etc. Free access to plumbing through door at end. Supports and 10" hood removable. Soapstone sink.

FOR more than a generation Peterson Furniture has been going into the nation's leading educational institutions. Much of the Peterson equipment installed twenty and more years ago is still in active service, bearing witness to the painstaking care in workmanship and selection of materials which has always typified these products. With all due credit to the beauty of design and finish, it is the built-in sturdiness which has made Peterson Laboratory and Library Equipment increasingly popular.

Write for catalogues

14 N — Laboratory Equipment *15 N — Library Equipment*

Leonard Peterson & Co., Inc.

MANUFACTURERS OF GUARANTEED LABORATORY AND LIBRARY FURNITURE.

1222-34 FULLERTON AVENUE **Office and Factory** CHICAGO, ILLLINOIS

PERSONAL NEWS OF SUPERINTENDENTS

—R. J. Elliott was made principal of the high school at Jordan Springs, Tenn.

—W. E. Games of South Solon, is the new superintendent at Ridgeway, Ohio. W. L. Salter was named principal.

—Charles P. Harper of Ruddle, W. Va., was chosen principal of the Romney, W. Va., high school.

—The new superintendent of Prospect, Ohio, is E. E. Keller of Toledo. He was formerly superintendent at Kelley's Island.

—Fred L. Teal of Canton, W. Va., is the newly chosen superintendent at Wheeling, W. Va.

—W. E. Pursley, county superintendent at Hartford City, Ind., has resigned.

—At Muskegon Heights, Mich., the new school board was elected on an anti-Tyler campaign. This will mean the retirement of Supt. L. L. Tyler.

—The school board of Greencastle, Ind., has chosen Warren J. Yount, superintendent, to succeed B. W. Kelly, resigned. Mr. Yount was the head of the Mooresville schools.

—Mrs. David D. Worcester of the Port Huron, Mich., board of education has brought charges against Principal Laurens A. Packard, claiming that he smoked cigarets. Several members of the board are disinclined to press the charges.

—Emery McLaughlin is the new superintendent at Fordson, Michigan. He began his professional career at Saginaw, Michigan, and is a graduate of the University of Michigan.

—D. E. Williams of Bronson has been chosen supervisor of negro schools for Florida. He succeeds J. H. Brinson and will reside at Tallahassee.

—Harry K. Law was chosen principal of Wartrace, Tenn., schools. He is a graduate of the Tennessee Teachers' College.

—W. L. Spouse of Georgetown, Ohio, was chosen principal of the Kenton, Ohio, high school.

—L. E. Marsh succeeds Fred Kelly, resigned, as superintendent at Boardman, Oregon. Mr. Kelly has gone to Fortuna, California.

—Guy C. Morrison of Erie, has been named superintendent at Greenville, Pa. He succeeds H. A. Krall, who will become vocational director.

—William L. Kershaw will head the Germantown evening high school, Philadelphia. He will succeed J. Elwood Calhoun, who has been made principal of the Simon Gratz Senior High School.

—J. A. Jacobson, formerly of Everett, has been chosen superintendent of the high school at Kirkland, Washington. He was for some time the superintendent of Snohomish county.

—Guy V. Whaley, for eight years superintendent at Pomona, Calif., has resigned. He will reside in Los Angeles.

—Henry P. Smith, who served Lawrence, Kansas, for seven years as superintendent, has resigned.

—Dr. Frank Cody, superintendent of schools at Detroit, Michigan, recently delivered a series of addresses at the summer session of the Akron, Ohio, university.

—Curtis H. Threlkeld of Des Moines, Iowa, is the newly chosen principal of the South Orange-Maplewood, N. J., senior high school. He is a graduate of the state teachers' college at Kirksville, Mo.

—Miss Fleece Robinson, of Morgantown, was chosen principal of the Simpson district schools of Clarksburg, W. Va.

—L. U. Sprigg was chosen superintendent at Villa Grove, Illinois.

—Mr. Clifford E. Reichard has been named as assistant superintendent of schools at Minneapolis, Minn. The appointment which became effective July 15, carries a salary of $3,000 per year.

—Supt. M. G. Clark of Sioux City, Iowa, has been reelected for a three-year term. The salary will be increased annually until it reaches the maximum of $9,000.

—Dr. Fannie Fern Andrews, on June 22, was elected associate of Radcliffe College for a term of six years. Dr. Andrews received the Ph.D., degree from Radcliffe College in 1923.

—Supt. C. E. Evans of Monett, Missouri, has been reelected for a fourth consecutive term, at a substantial increase in salary.

—Mr. J. Will Pierce, formerly high-school inspector for Missouri, has accepted the superintendency at Paragould, Ark.

—Mr. Egbert Jennings of Kennett, Mo., has accepted the superintendency of the Foreman Special School District at Foreman, Ark.

—Mr. C. E. Burton has been appointed rural school inspector for southeast Missouri.

—Supt. J. C. West of Bemidji, Minn., has been reelected for a seventh consecutive term.

—Supt. J. A. Koontz of Joplin, Mo., who is completing another term in his present position, has had a long period of service. He was superintendent from 1913 to 1916 when he resigned to go elsewhere. In 1922 he returned to Joplin and at the present time has completed eight years of service. During his incumbency, the school system has completed and occupied a high school costing $350,000. has carried out improvements to the school plant amounting to $75,000 in 1923, and further improvements costing $750,000 in 1925.

—Dr. Mell L. Duggan of Clayton, Georgia, has been appointed state superintendent of public instruction by Governor Hardman, to succeed the late Fort E. Land. He was promoted from the position of state supervisor of rural schools.

He first became connected with the department when he, with Mr. Land and Celeste Parrish, was named state supervisor by Dr. M. L. Brittain, the then state superintendent. Prior to that time he had been county superintendent of Hancock county for eighteen years. He has served as secretary of the county school superintendents' association for thirty-three years.

—Mr. T. Virgil Truman has been made principal of the Emerson, Hamilton, and Columbia Schools, at Pasadena, California.

—Mrs. Mae Porter, elected superintendent of Dewitt county, Illinois, schools last year, assumed her office in July. Mrs. Porter is the second woman to have been elected to the office of superintendent of schools in Dewitt county. Mrs. Hattie Porter Wilson served two terms in that office several years ago. The present superintendent-elect was named on the Democratic ticket.

—Mr. J. R. Bullington has been chosen superintendent of the Ashdown, Arkansas, high school.

—Mr. George W. Sutton has been reelected superintendent of the Monticello, Illinois, schools.

—Supt. Charles L. Poor of Traverse City, Mich., has been reelected for a three-year term. Mr.



Even on Week-ends
—You can make them like new



It takes only 4 minutes or less to whisk away varnish, gouges, knife cuts, from a "battle-scarred" desk with the powerful, fast-cutting Clarke Vacuum Portable Sander.

Makes 120 to 200 desk tops like new on a single Saturday. And because it's dustless, you can revarnish in the same room where the sander is working. By Monday, every desk is dry and ready for use.

Hundreds of schools use the Clarke to keep desks from getting "run down"—to resurface 800 to 1600 square feet of floor a day—to renew woodwork—for dozens of types of maintenance work.

No more waiting for lengthy vacation periods! The Clarke is always ready for duty—anywhere. A man can carry it from place to place with one hand. Weighs less than 23 pounds. Connects to any light socket. Provides a fine, simple industrial tool for manual training classes.

Learn about the big work this remarkable little machine is doing for modern schools as well as large industrial plants. Learn how it quickly pays its own way. Mail coupon for the facts.

Clarke Sanding Machine Co.
Dept. G-9—3821 Cortland St., Chicago, Ill.

POWERFUL - FAST CUTTING
CLARKE
VACUUM PORTABLE SANDER
TRADE MARK

CLARKE SANDING MACHINE CO.,
Dept. G-9, 3821 Cortland St., Chicago.
Please send full information regarding the Clarke Vacuum Portable Sanders
☐ for school maintenance work ☐ for manual training ☐ for both.
NAME .....
ADDRESS .....
CITY ..... STATE .....

Poor's salary has been increased to $5,600 for 1927, $5,700 for 1928, and $5,800 for 1929.

—Mr. D. H. Kay of Anderson, Mo., has been elected superintendent of schools at Liberty. Mr. Kay succeeds O. G. Sanford.

—Mr. E. E. Keller has been elected superintendent of schools at Prospect, Ohio.

—Mr. F. O. Medsker of Boston, Ind., has been elected superintendent of schools at Alexandria.

—Mr. A. W. Clevenger has resigned as superintendent of schools at Wakefield, Mich.

—Mr. Charles F. Miller, state superintendent of public instruction of Indiana, has been elected superintendent of schools at Indianapolis, to succeed E. U. Graff.

—Supt. A. H. Hughey of El Paso, Texas, has been given an increase of $400 in salary for the next year.

—Mr. LeRoy Wood of Boonton, N. J., formerly assistant superintendent of schools at Quincy, Mass., has been appointed superintendent of schools at Mansfield, Mass.

—Mr. A. W. Clevenger, formerly superintendent of schools at Wakefield, Mich., in August, assumed the duties of high-school inspector for the University of Michigan. Mr. Clevenger was at Wakefield six years and previous to his appointment at the latter place was an assistant inspector of high schools in Illinois. Mr. Clevenger holds a master's degree from Columbia University and will shortly complete his work for a doctor's degree at the University of Chicago.

—Mr. A. W. Schlegel of Port Carbon, Pa., has been elected supervising principal at Red Lion. Mr. Schlegel is succeeded by Mr. B. L. Clark, formerly of Mountain Top, Pa.

—Mr. E. J. Arnold, for seven years head of the school system at Huntsville, Ohio, has been elected superintendent of schools at Bremen.

—Mr. H. F. Allen has been elected superintendent of schools at El Reno, Okla.

—Mr. Edward N. Dietrich of Geneva, Ohio, has been elected superintendent of schools at Bucyrus, to succeed Mr. J. L. Ward.

—Mr. E. L. Bowsher of Wauseon, Ohio, has been elected superintendent of schools at Ashland. Mr. Bowsher succeeds J. A. McDowell, who filled the position for nineteen years.

—Mr. J. Edward Taylor has been elected superintendent of schools in Sangamon county, Illinois, to succeed Mr. E. C. Pruitt, who has resigned after a service of 21 years.

—Mr. John B. Gragg, 75, recently closed an active service of 52 years in the schools of Pike county, Illinois. Mr. Gragg will be succeeded by Miss Mina Bauch.

—Dr. James A. Nugent, superintendent of schools at Jersey City, N. J., has refused the position of state commissioner of education at the hands of the governor of the state. Two other men are in line for the appointment, Mr. L. J. Jackson, assistant commissioner of education, and Mr. I. T. Chapman, superintendent of schools at Elizabeth.

—Mr. W. S. Forney, formerly superintendent of schools at Alexandria, Ind., has become principal of the Wiley High School at Terre Haute.

—Supt. F. R. Phillip of Alma, Mich., has been re-elected for a term of two years.

—Mr. J. M. McDonald, for the past four years superintendent of schools at Kemmerer, Wyoming, has been elected superintendent of the Pocatello, Idaho, schools for a period of two years. In electing Mr. McDonald, the board fixed his salary at $5,300 per year.

Mr. McDonald is succeeded at Kemmerer by E. D. Bloom, who, during the past three years, has been superintendent at Twin Falls, Idaho.

—Mr. G. W. Allen of Lincoln, Nebr., has been elected superintendent of schools at Scottsbluff. Mr. Allen succeeds E. L. Rouse who has gone to the Chadron Normal School.

—Mr. Ivor Robinson has been elected superintendent of schools at Boonville, Ind., to succeed C. C. Katterjohn.

—The election of a new board of education at Superior, Wis., resulted in the dismissal of Supt. P. R. Spencer and the reemployment of Principal C. G. Wade and Miss Lulu Dickinson, a teacher, who had been discharged by the superintendent.

—Mr. John J. Lee has resigned as superintendent of schools at Evart, Mich., to accept a position with the state education department. Mr. Lee is succeeded at Evart by Mr. Fred Smiley.

—Mr. I. J. Robinson, formerly principal of the high school at Boonville, Ind., has been elected superintendent of schools to succeed C. C. Katterjohn.

—Mr. R. E. Beebe has entered upon his duties as superintendent of schools at Naperville, Ill.

—Mr. C. L. Bemer of Lake Linden, Mich., has been elected superintendent of schools at Wakefield, to succeed A. W. Clevenger.

—Mr. W. L. Kocher of Mingo Junction, Ohio, has been elected superintendent of schools at Martins Ferry, to succeed E. H. Kerr.

—Noah M. Mason, superintendent of schools at Oglesby, has been appointed a member of the Illinois state normal school board.

—The school board of Quincy, Illinois, named Merle C. Green principal of the Franklin school, L. H. Whittler, principal of the Berrian school, and D. Ronald W. Clark principal of the Webster school. Principal Clark is only 24 years of age.

—The Hellertown, Pa., school board elected Mumford E. Illick principal of the high school.

—W. W. Tucker is the newly elected superintendent of Henry county, Illinois.

—The school board of Glendale, California, increased Superintendent R. D. White's salary from $490 to $525, thus making the annual salary $6,300. The salary of business manager John T. Cate was fixed at $3,900 a year.

—Mr. James P. Warren, of the Eastern District High School, New York City, has been appointed principal of the Bryant High School in Long Island City, to succeed Peter E. Demarest. Mr. Warren has been connected with the school system for a quarter of a century and had been on the faculty of the Eastern District High School since 1903.

—Mr. A. W. Presser was appointed purchasing agent for the schools of Keene, N. H.

—The New York City board of education has appointed Bertha Elizabeth Mandel and William Jansen as assistant directors of reference, research, and statistics.

—Mr. F. O. Blunt, for 28 years supervisor of maintenance in the schools of Lowell, Mass., died on June 24.

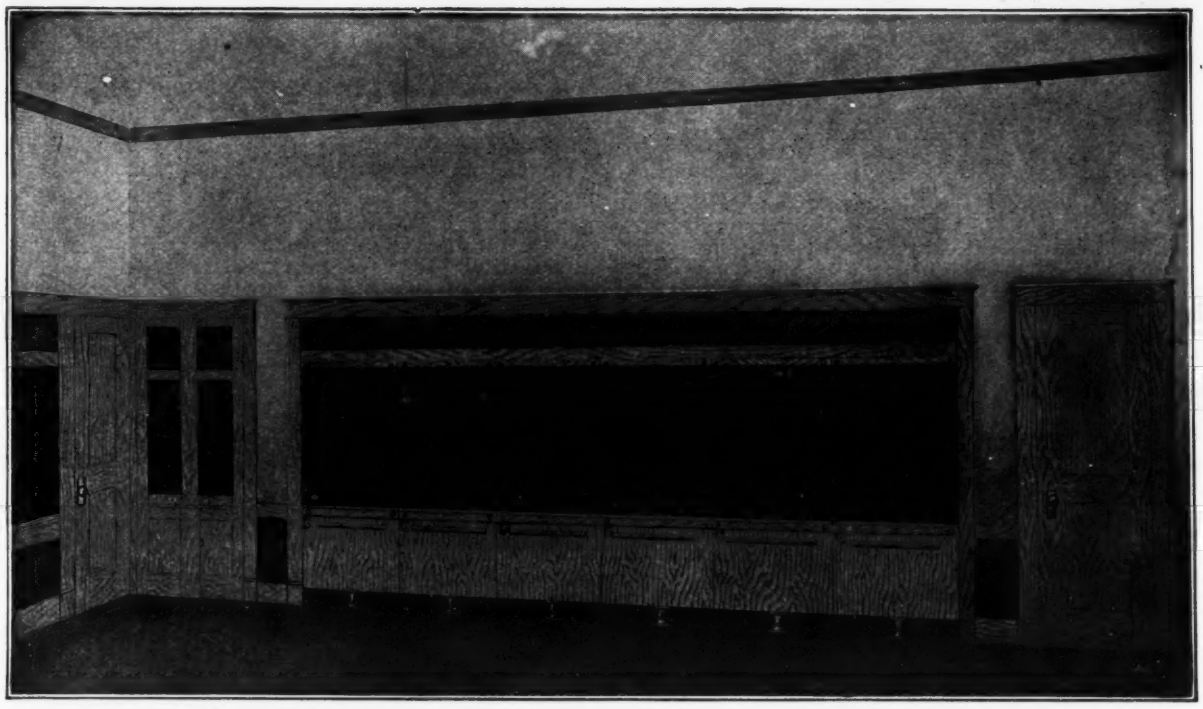
—Dr. Frank P. Graves, New York state commissioner of education, has been awarded the Butler medal for "conspicuous attainments in educational theory and administration."

—Supt. Fred Bruner of Bonne Terre, Mo., has been reelected for another year.

—Mr. Ernest W. Tiegs, formerly assistant superintendent of schools at Minneapolis, Minn., has accepted a position on the faculty of the University of Southern California.

OPEN IT IN A SECOND

All Doors Open in One Operation Or



Any Door May Be Opened Individually

MILLER SCHOOL WARDROBE

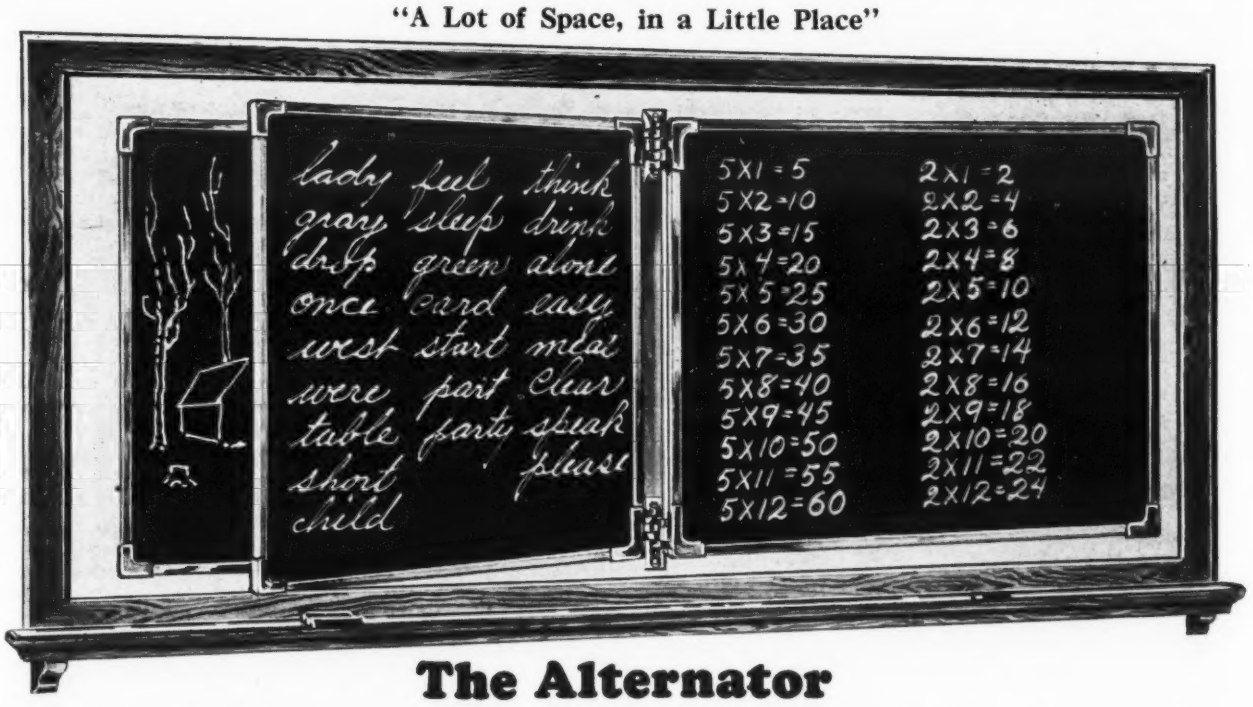
REDUCES BUILDING COSTS.
PERFECT DISCIPLINE.
NOTHING TO WEAR OUT.

AFFORDS PERFECT VENTILATION.
DEFINITE DISMISSAL POINT.
EXTRA STORAGE SPACE
STOPS PETTY PILFERING.

SAVES ON HEATING EXPENSE.
NO WASTE OF BLACK BOARD SPACE.
MORE HANGING SPACE.

Write for Catalogue W-6

"A Lot of Space, in a Little Place"



The Alternator

Committee selected as first prize, name given above, sent in by Martin Kavanagh, Box 148, Treherne, Manitoba, Can.

2nd PRIZE
Ed. W. Stitt
500 Park Ave.,
New York City

SAVE TIME—Prepare lessons in advance—Save lessons from day to day.
EASY FOR TEACHER—Right by teacher's desk—Nothing to lift.
MORE BLACKBOARD—Available for tests, etc.
NOTHING TO GET OUT OF ORDER—Swings like a book.

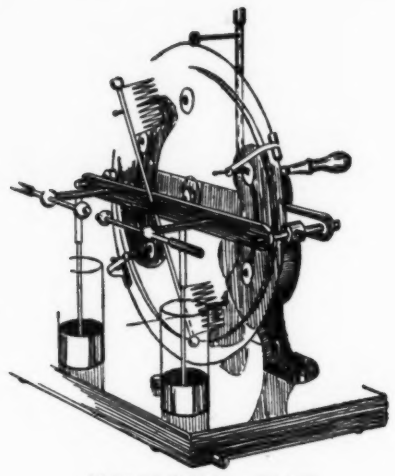
3rd PRIZE
Geo. K. Gombarts
500 West 59th St.
New York City

Write for Catalogue T-2

K–M SUPPLY CO.

KANSAS CITY 123 WEST 8th ST. MISSOURI

LIKE NEW *after years of service!*



NUMBER 82-150

ONE TURN of the crank — a long, fat spark cracks through the air . . . and this same result year in and year out. This new design built around a positive, sweet-running, gear-drive transforms this ordinarily cumbersome, delicate contrivance into a compact, rugged, machine to be relied on for long years of dependable service. Teachers tell us their Harcourt Toepler-Holtz machines are Like New even after years of the hardest service.

Not in this one apparatus alone but in the entire Harcourt line whether for physics, chemistry, biology, or general science, this same Quality Standard is maintained. Guard against laboratory delays by selecting science apparatus backed by 32 years of continuous service to the leading High Schools of the country.

L. E. KNOTT APPARATUS COMPANY

79 Amherst Street · Cambridge Massachusetts

Branch — 70 Fifth Avenue New York

Harcourt *Laboratory Equipment*

STANDARD *for* EDUCATION SINCE 1895

K KNOTT

SCHOOL HYGIENE

NEW YORK COMMISSION RENEWS VENTILATION STUDIES

The objectives of the New York Commission on Ventilation are outlined in a recent quarterly publication of the Milbank Memorial Fund as follows:

1. To continue the investigation of the underlying physical laws and physiological reactions showing the relation of air conditions to health.
2. To carry forward the comparative study of various methods of schoolroom ventilation.
3. To accumulate data in regard to systems of window ventilation actually in operation and to study further the conditions essential to the success of this method, with regard to the amount of radiation, dimensions of exhaust ducts, etc.
4. To answer inquiries and requests for assistance from school authorities, architects, and others.
5. To study the ventilation legislation in the various states, and to consider possible standards of ventilation which might be recommended as substitutes for the present requirements, which are generally based on discredited theories.

The group which functioned some years ago as the New York state commission on ventilation was revived at the suggestion of Prof. C.-E. A. Winslow, chairman of the original commission, and officially resumed activities in 1926, with offices in New York City, in charge of Thomas J. Duffield.

At a meeting of the board of directors of the Milbank Memorial Fund in March, 1927, the Commission was reorganized as an unofficial organization to be known as the New York Commission on Ventilation, which was to continue further ventilation research administration and education in cooperation with the technical board of the Milbank Memorial Fund.

To accumulate more data as to the relation between systems of ventilation in use and the health of school children, and as to the exact conditions under which window-gravity ventilation operates most successfully, the Commission is conducting comprehensive studies in Syracuse and Cattaraugus county, in cooperation with the urban and rural health demonstrations which have been stimulated and financed by the Milbank Fund. These studies are of special interest because they are the first of their kind to be made in small country schools. The records made in 1926-27 are being tabulated and studied, and plans are being made for resuming the collection of data in the sections studied.

Diphtheria Immunization in Philadelphia

Dr. Walter S. Cornell, director of the divison of medical inspection of the Philadelphia public schools, has recently issued a report on diphtheria immunization of the local school children in which he tells about past performance, results obtained, and future plans in connection with the treatment.

The report points out that of the 110,139 pupils in the elementary grades who received the T. A. injections, 44 later contracted diphtheria, the disease appearing at least one month after the injections were given. This was a ratio of 1:2500.

Of the 99,639 pupils in the elementary grades who did not receive the T. A. injections, 317 later contracted diphtheria. This was a ratio of 1:300.

It is evident that the children who received the injections had only one-eighth the probability of later contracting the disease that exists in the case of the children who did not receive the injections. Actually the benefit is even greater than this because almost all of the cases of diphtheria in the injected group occurred within six months of the date of the T. A. injections—too early for the full development of the immunity.

Another method of stating the results is to say that the 110,139 children who received the injections would have suffered from just 350 cases of diphtheria if they had not been given the T. A. mixture, bearing in mind that the 99,639 non-protected children suffered from 317 cases. But actually the children in the protected group suffered from only 44 cases of diphtheria. There was, therefore, a reduction of 350—44—306 cases. This was the result with a corresponding saving of 30 lives, based on the usual ten per cent mortality of this disease.

HYGIENE AND SANITATION

—The Philadelphia board of education has issued an order for the establishment of two new schools for backward and sick children. Classes for nutrition, tubercular children, and orthopedic cases will be established in one school and for retarded children in the other. Placing of children in special classes is made on the basis of a study of report cards, the recommendation of the teacher, and a psychological test. At present there are twenty public schools in the city, in which there are between five and 24 special classes. Eight entire schools are devoted to special classes only.

—The return of summer has brought again the "round-up" of children who are to enter school for the first time next fall, which has been carried on by the National Congress of Parent-Teacher Associations. Last year 50,000 children were examined, and nearly half of the defects noted were corrected. In 1926 twice as many states participated in the round-up as in the previous year.

—Bridgeport, Conn. A dental survey was recently made of 24,000 children from the kindergarten to the eighth grade in both the public and parochial schools. The results were compared with those in an examination of 1,000 children of another community where no school dental work has been done. It was found that eight per cent of the Bridgeport children and two per cent of the children of the other community had no fillings and no cavities. Bridgeport has carried on school dental work for the last ten years.

—Norristown, Pa. Two medical inspectors have been appointed for the school year, at salaries of $600 per annum.

—A renewed campaign to stamp out diphtheria has been inaugurated at Stevens Point, Wis. Children of preschool age are included in the free treatment given.

—According to Dr. James Frederick Rogers of the United States bureau of education, decayed teeth constitute the most important health problem among pupils. He recently said: "The most important single problem in the health of the school child is rotting teeth, though the very existence of such a condition is only indicative of causes back of dental disease which need to be dealt with. The dental problem has hitherto been such an overwhelming one from all angles that nowhere has it been fully coped with, and all preventive measures have failed to save a large proportion of teeth from extraction or troublesome root fillings."

Announcing another step in typewriting tests

TESTS and training in plain copy work alone, fall short of preparing the student for the best paid stenographic employment.

Therefore, we have prepared for September distribution a series of special tests on simple tabulation, billing and other uses of the decimal tabulator.

These tests are unique in the field of typewriting test material, and in connection with the L C Smith inbuilt tabulator help the student to train thoroughly for all phases of office work. For further information regarding these new tests write to our School Department.



L C Smith & Corona Typewriters Inc
School Department, Syracuse, N.Y.



The Inbuilt Tabulator

Only the L C Smith gives this feature without extra cost. The tabulator is built right into the machine and eliminates the necessity of having special tabulating machines or attachments.

L C Smith

THE BALL-BEARING OFFICE MACHINE

Kindle that latent desire for achievement



Lithographed in full color by Goes Direct Process Offset Lithography. Size 9⅜ inches by 11⅞ inches.

Six new inspirational subjects including birds, flowers, and symbolic designs.

Your own school supply jobber, or your own printer, has this series, or can get it for you. Very reasonably priced, considering the high standards presented.

The plastic child mind can be stimulated to greater activity by holding before it an alluring inducement. It will respond quickly to a printed or written acknowledgment of its accomplishments. And when that acknowledgment is in the form of an Award so beautiful that it can be exhibited with pride, there is a double incentive to work for it and earn it.

Goes new Certificate of Award series is specially designed with that thought in view. Its subjects are inspirational, its colors bright and pleasing. The appeal of its sheer beauty awakens a desire for possession and offers an incentive for maximum effort. You will find this series a valuable help in your work of mind development, offering as it does a wide range of subjects to choose from.

GOES LITHOGRAPHING CO.

57 West 61st Street, Chicago, Illinois

(3855C)

NEWS OF THE SCHOOL BOARDS

COST OF TRANSPORTATION IN NEW JERSEY

The state education department of New Jersey has issued a report which represents a study of the cost of transportation. For the last fiscal school year ending in June, 1926, there was expended $1,549,891 for transporting 45,900 pupils. For the year ending June 30, 1901, the cost of transporting an average of 122 pupils was $4,420. Since that time the cost has increased $1,545,470, while the number of pupils transported has increased by 45,778 pupils.

The data which has been compiled shows that the greatest per cent increase in transportation costs took place between 1905 and 1910. This increase was 1402.3 per cent. The average cost per pupil per year for transportation was highest in 1901. This was due to the fact that only the average number transported was used instead of the actual number transported. For 1920 the average cost per pupil per year was $35.72, which was the highest since 1901. For the last two years the cost varies by .40 per pupil per year.

In 1901 less than one half of one tenth per cent of the pupils enrolled were transported at the expense of the local district. This has increased to .2 per cent in 1905, 1.2 per cent in 1910, 2.5 per cent in 1915, 3.7 per cent in 1920, 6.2 per cent in 1925, and 6.4 per cent in 1926.

With the increased cost of transportation has come a larger amount each year to be apportioned to the various districts by the county superintendent. In 1921-22 $723,268 was appropriated; in 1924-25 $929,440 was appropriated, and in 1926-27 $1,160,897 was appropriated. During the period from 1921-22 to 1926-27 the apportionment for transportation increased $437,634, or 60.5 per cent.

There were 21,927 pupils transported within the districts with an average of 3.8 miles per pupil. Nine thousand nine hundred seventy-three pupils, or 45.5 per cent, were in the kindergarten, first, second, third, and fourth grades; 5,383, or 24.5 per cent in grades five and six; 4,902, or 22.4 per cent in grades seven and eight, and 1,669, or 7.6 per cent in high school.

The average cost per pupil mile per year within the districts was $9.21, and $7.87 per pupil mile per year outside of the districts. The total average cost per pupil per year was $8.52. Three and six tenths per cent of the pupils were enrolled in kindergarten and elementary grades and 18.0 per cent were enrolled in high schools.

MONTHLY FINANCIAL STATEMENT

BOARD OF EDUCATION

WATERTOWN, WIS. ..... 192..

	Budget Estimate 1927	Disbursements to Date	Balance Jan 192..	
School Census	150.00			
Salary of clerk of board	900.00			
Office supplies and expenses of clerk	50.00			
Other expenses of board	150.00			
Salary of superintendent of schools	3250.00			
Salary of superintendent's clerk	900.00			
Superintendent's office supplies	400.00			
Express, freight, drayage	455.00			
Other expenses supt's. office	285.00			
Salary of music supervisor	1440.00			
Salaries of teachers	71320.00			
Text books	1000.00			
General supplies	1000.00			
Supplies for commercial department	50.00			
Supplies for fine arts	100.00			
Supplies for industrial arts	500.00			
Supplies for household arts	400.00			
Supplies for physics and chemistry	200.00			
Supplies for physical education	25.00			
Other expenses including commencement	250.00			
Dental inspection	100.00			
Wages of janitors and other employes	6000.00			
Janitor supplies	500.00			
Fuel	3400.00			
Water	550.00			
Light and power	2700.00			
Other expenses of operation	200.00			
Repair of buildings and upkeep of grounds				
a. Repair of High school building	3100.00			
b. Repair of Lincoln school building	775.00			
c. Repair of Douglas school building	100.00			
d. Repair of Webster school building	200.00			
Repair and replacement of service systems	300.00			
Repair and replacement of equipment	500.00			
Other expenses of maintenance	125.00			
Fire insurance and Lloyd Thomas appraisal	1250.00			
Equipment of old buildings, exclusive of replacements	1200.00			
Other capital outlay - Library	900.00			

THE ORIGINAL FORM MEASURES 8 by 13 INCHES.

The amount of money which the state reimburses the districts does not equal 75 per cent of the total amount spent for transportation, because in many cases the county superintendent does not approve the total amount and apportions the state money on the amount approved by him.

KEEPING THE SCHOOL BOARD INFORMED

As a means of a monthly check on the expenditures of the board of education, Miss Bertha Feld, clerk of the board of education at Watertown, Wisconsin, has developed the accompanying blank.

The books of the board of education and annual budget are prepared in accordance with the accounting requirements of the state of Wisconsin and are based on the requirements of the United States Bureau of Education. In the practical reporting of the receipts and disbursements a limited number of accounts are set up as is indicated in the blank. The monthly financial statement is prepared on the first of each month as soon as the books have been closed. Copies of the blank are submitted to each member of the board of education and to the superintendent of schools.

The information as given is used not only for determining expenditures which have been already made, but for checking requests for proposed expenditures. It has been possible through intelligent use of the information given to keep the schools closely within the budget appropriations.

A NEW SALARY SCHEDULE AT BEATRICE, NEBR.

The new salary schedule which goes into effect in the schools of Beatrice, Nebr., in September, 1927, is of the unit type and provides uniform pay in the grades and in the high school wherever training and experience are equal. The schedule, which was prepared by Mr. W. H. Morton, superintendent of schools, is as follows:

I. Qualifications

1. *Educational.*—It shall be the policy of the board of education not to employ, for any position in the schools, teachers who have had less than two years' professional or college training beyond graduation from a four-year high school.

To be eligible to a position in the senior high school the applicant must be a college or university graduate or the equivalent.

In selecting teachers for a position in the junior high school, preference shall be given to applicants holding a college degree.

(Concluded on Page 144)



Let "X" Enlighten Your Crayon Quality

IF, before buying, you could visit the factories where the different brands of wax crayons are manufactured, you would observe many things interesting to your experienced purchasing eye. One of the high spots in your trip would be your visit to The American Crayon Company plant at Sandusky, Ohio, the Home of "Prang Crayonex."

You would see the wonderfully brilliant "Crayonex" pigments being mixed with the purest waxes obtainable. You would realize that crayons are essentially pigments and that the secret of keeping the color brilliancy lies in selecting waxes that are colorless in themselves and will not affect the pigment.

In short, when you finished your trip you would have the "inside information" for future crayon purchasing. And it would be no coincidence that the facts gathered would induce you to select unhesitatingly the same wax crayon that art instructors from coast to coast prefer - "Prang Crayonex".



For the same notable qualities which are obvious in our manufacturing process come out faithfully when "Crayonex" is in use. Striking brilliancy, soft blending, smooth texture and unvarying consistency can only be the results of superior ingredients and more careful manufacturing.

In selecting wax crayons let the "ex" in "Crayonex" point the way to better crayons and class-work.

Let us quote you on your school requirements.

For Best Effects Use "Crayonex"

THE AMERICAN CRAYON COMPANY
HOME OFFICE AND FACTORIES
434 HAYES AVENUE
SANDUSKY · OHIO
"Old Faithful"
NEW YORK DALLAS SAN FRANCISCO

LEADERSHIP SINCE 1835
92 Years of Faithful Service

The child's friend at home is no stranger in the school

CRAYOLA Crayons and other Gold Medal School Products derive a good part of their popularity through their extensive use in millions of homes.

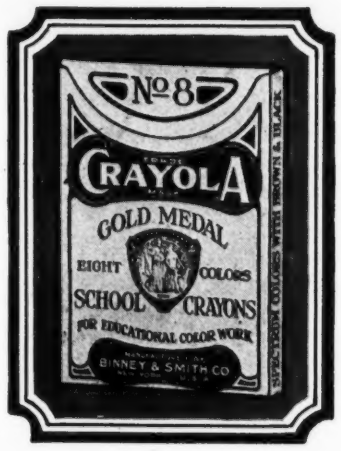
Progressive School Boards sense the fact that a playroom favorite makes an ideal classroom necessity, by easing the teacher's labors through quickening the pupil's attention.

Yet, when Gold Medal Products are sold to the School, Gold Medal Service has just begun. Backing up the line is an Art Service Bureau under the directorship of Rose Netzorg Kerr. Free professional advice is available at all times to Art Supervisors and Teachers.

See to it that *your* school uses Gold Medal, and that *your* instructors are on our mailing list for free samples and helpful hints on their art problems.

Address Art Service Bureau

BINNEY & SMITH CO.
41 East 42nd Street New York. N.Y.



Gold Medal Products

CRAYOLA Wax Crayon
PERMA Pressed Crayon
SPECTRA Pastel Crayon
ARTISTA Water Colors
ANTI-DUST 95% pure Chalk Crayon
AN-DU-SEPTIC Dustless Crayon
ATLANTIC White Chalk Crayon
White and Colored Blackboard Chalk
Lecturers' Colored Chalk

(Concluded from Page 142)

2. *Experimental.*—As a general policy two years of actual teaching experience will be required.

3. *Legal.*—Each teacher must hold a Nebraska teacher's certificate of proper class. This certificate must be registered in the office of the county superintendent of Gage county, Beatrice, Nebraska. The certificate should then be sent to the office of the secretary of the board of education, Beatrice, in order that the information may be on file in that office.

II. Salary Schedule

This salary schedule will hold for all teachers regardless of the position to which they may be assigned in the system.

Teachers are classified according to their preparation.

Four-Year Training.—Those who are graduates of a four-year standard college or the equivalent. The minimum salary shall be $1,200. The maximum shall be $1,800.

Two-Year Training.—Those who are graduates of a two-year normal school or teachers' college or the equivalent. The minimum salary shall be $1,000. The maximum salary shall be $1,400.

Three-Year Training.—Add $75 to the two-year standards.

A. M. Degree—Add $100 to the four-year standards.

Salary Scale

Years of Experience Accredited Schools	Two-Year Training	Four-Year Training
	$1,000	$1,200
1	1,075	1,300
2	1,150	1,400
3	1,225	1,500
4	1,300	1,600
5 or more	1,400	1,700
6 or more		1,800

In determining the salary for teachers first entering the Beatrice schools, credit shall be given for teaching in other schools as follows: For schools not accredited to the North Central Association, $25 a year; and for schools accredited to the North Central Association, $75 a year for the two-year training; and $100 a year for the four-year training; providing, that no teacher from the two-year group shall enter at a salary more than $1,200 and from the four-year group at a salary more than $1,500. Credit in the Beatrice schools shall be at the rate of $75 a year for the two-year group and $100 a year for the four-year group.

Five days' salary will be allowed during the year for personal illness or serious illness or death in the immediate family.

Salaries will be paid in ten equal installments. The first installment will be paid on the fifteenth day of September and succeeding installments on the first day of each month, except the tenth or final installment, which will be paid at the close of school.

While these qualifications and salaries shall be observed generally by the board of education, the right is reserved to vary therefrom as may be deemed best.

BOARDS OF EDUCATION

—Bucyrus, Ohio. The school board is having trouble in filling the superintendency. The board recently refused to reemploy Mr. J. L. Ward, and then proceeded to elect another man to succeed him. Mr. E. N. Deitrich of Geneva, Ohio, was selected as superintendent, but he has since notified the board that he will not accept the position.

—Chicago, Ill. President J. L. Coath's school-economy program is beginning to function. A reduction of the staff in the business department has been planned with an approximate annual saving of $750,000. In addition to the changes in the business department, there will be a reorganization of the law department. The new list of 250 employees does not include employees in bureaus recently eliminated and heads of other bureaus whose resignations have been presented.

—Boston, Mass. The board of education has granted increases in salary to a number of the executive heads in the business department. The salary of the business manager has been fixed at $7,500 per annum, that of the secretary of the board at $6,000, and that of the schoolhouse custodian at $4,800 per annum, beginning with September, 1927.

—Chicago, Ill. The board of education on August 4, took action placing 392 engineer-custodians and 2,400 school employees under civil service, in keeping with a recent decision of the Supreme court. In addition, the board threw 400 teacher-clerks out of positions in the offices of district superintendents, principals, and assistant principals.

The board, in placing all maintenance employees under civil service, has assumed direct control over all school engineers, firemen, janitors, sweepers, and window washers. The engineer-custodians are responsible for the cleanliness and heating of the buildings and were formerly employed by contract at prices ranging as high as $50,000 annually. Under the new civil-service plan, these employees will be forced to accept positions as plant superintendents at $260 to $405 per month, or seek new positions outside the school system.

Another economy move of the board is the proposed installation of electrically controlled ventilating machinery in 28 school buildings now under construction. This change will eliminate one fireman and one engineer from the staff at each building.

—A movement in aid of the children whose schools were destroyed in the flood-stricken area of the lower Mississippi River has been inaugurated by the National Education Association. It is necessary that support be provided other than local and state sources, the association asserts, in order that even a minimum program of education may be provided for the children of the flood areas.

—There are forty-five thousand voters in Duluth, Minn. A few more than five thousand recorded their votes at a recent school election. The Duluth Herald in commenting on the election results said:

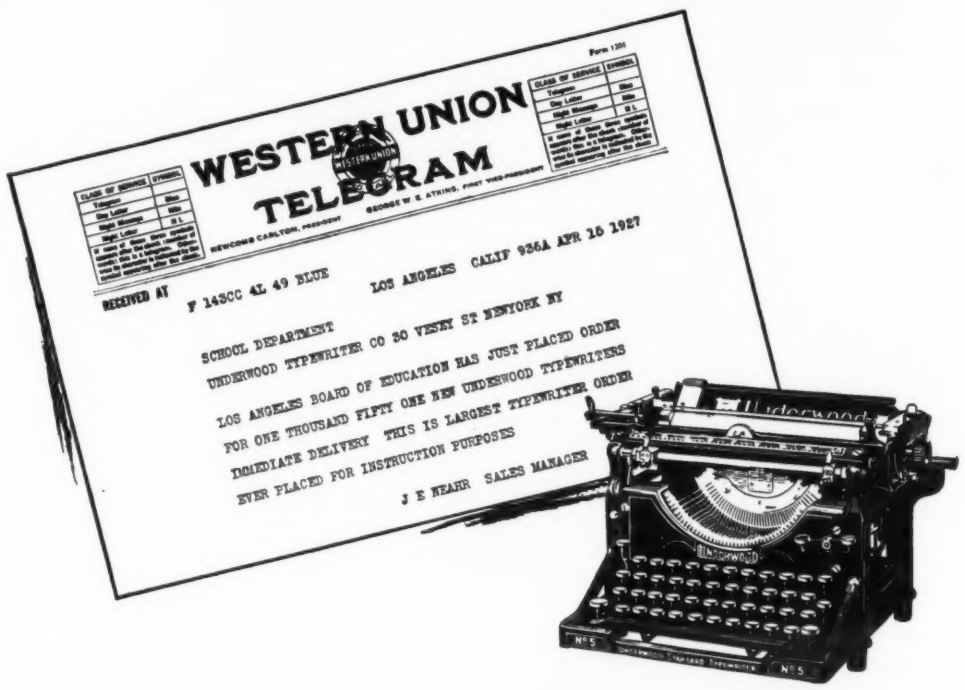
"There is no reason to complain of the outcome. but there is a reason to wonder that elections that get so little attention as school elections turn out, on the whole, so well. This being so, any time a compact crowd with a purpose, good or bad, wishes to control a Duluth school election it can do it easily. And that is a dangerous situation, as Duluth may learn some day."

—Plymouth, Mass. During the past four years pupils who are under-age, have been admitted to the first grade upon the satisfactory completion of an intelligence test given by a Harvard professor. The arrangement has worked out satisfactorily and the results have been good.

With the opening of the new school year it is planned to add a further requirement for admission. Under the new rule, each child who is under-age must present a certificate of physical fitness from the family physician or school doctor before he may take the psychological test.

One Thousand Fifty One UNDERWOODS

Purchased by the Los Angeles Board *of* Education



Largest Typewriter Order Ever Placed for Instruction Purposes

In placing this record-breaking order for Underwood Typewriters, the Los Angeles School Board paid striking tribute to the superiority of the Underwood for use in teaching typewriting.

School executives realize more and more that the selection of the right training equipment has a very definite bearing on students' progress in typewriting.

From its introduction the Underwood became the "Machine of Experts." Its responsive touch, its smooth, perfectly timed action give a speed and accuracy beyond the needs of even the World's fastest typists.

UNDERWOOD TYPEWRITER CO., INC.
UNDERWOOD BUILDING ~ NEW YORK CITY
Branches in all Principal Cities

More Underwoods are used for teaching typewriting than all other makes combined

"Continental"

The Supreme School Room Scale



Weighs the Most Pupils Accurately in the Least Time

MORE pupils can be accurately weighed in a given time on a "CONTINENTAL" Special School Room Scale than on any other. When using it, the teacher can remain seated, work the scale with her left hand and record the weight with her right, an arrangement unsurpassed for speedy weighing.

Every feature of the "CONTINENTAL" was designed for school room use. The insulated cork platform does not chill the children's stockinged feet. The Scale Level Indicator notifies the teacher if the floor is uneven, so that she can level the scale to secure correct weight. The strong durable casters make it easy to roll away.

Agate beam bearings and a Die Cast Beam (which will not rust, bend, or warp) insure the permanent accuracy of the "CONTINENTAL."

Sent on Approval

Let us send you this scale on approval. Test it out. See how many more pupils it enables a teacher to weigh in a given time. See how it cuts short the confusion accompanying weighing.

A trial of this splendid scale will give you the reasons for its rapidly growing popularity and the increasing stream of repeat orders received on it from America's best schools.

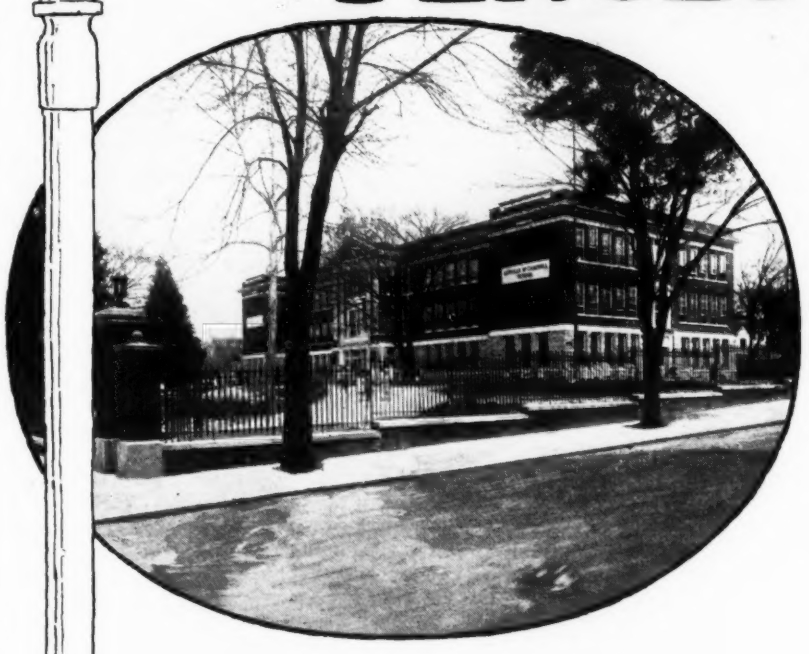
For detailed information and prices on this scale or any other weighing equipment, write us today.

Health Scale Specialists

Continental Scale Works

Desk 18-E — 5701 Claremont Ave.,
CHICAGO, ILL.

Stewart FENCES



STEWART FENCES

Combine Dignity with Protection

One of the ideas of modern educators is that a school "plant" should have a style and character worthy of its high purpose. A tasteful fence surrounding the school grounds or property helps carry out this idea.

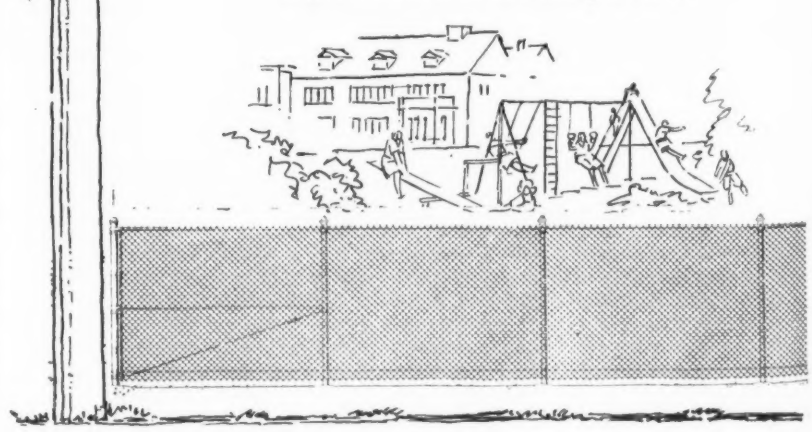
In the Stewart Line are fences suitable for every school purpose — the dignity and beauty of wrought iron for the street frontages and gates— the unobtrusive effectiveness of chain link for side lines and rear, playgrounds and athletic fields. All alike embody the Stewart craftsmanship which 40 years of fence building have perfected.

Let us send you the Catalog—or a representative to confer with you.

The Stewart Iron Works Co., Inc.

420 Stewart Block Cincinnati, Ohio

Representatives in all Principal Cities



The "FOLD-UP"—another long-lasting Beacon Chair which costs no more than an ordinary perishable wooden chair!



Tubular Steel Frame

The "FOLD-UP," as its name implies, folds quickly and easily to a thickness of only 1¾ inches. A set of four fits nicely into a 7-inch space. (They fold FLAT, too, to facilitate stacking.)

NOW COMES the "FOLD-UP"—to share with Beacon Standard Model Folding Chairs a merited leadership in the field of auxiliary seating equipment. Although designed along different lines to make possible a *lower price*, the Beacon "FOLD-UP" retains those important qualities which have won for the Beacon standard model a nationwide recognition.

All-Steel Construction

Like its companion model, the "FOLD-UP" is made entirely of steel (with the exception of the seat and floor contacts). The frame is of tubular steel, electrically welded and riveted. *There are no bolts or nuts to come loose.*

No Sliding Parts

More important still is the fact that there are NO SLIDING PARTS TO GET OUT OF ALIGNMENT. The "FOLD-UP" is absolutely rigid and amazingly strong—yet it weighs only 7¾ pounds. It will carry a load more than 100 times its own weight.

For Proper Posture

The "FOLD-UP" has a back of ample proportions, correctly curved to induce proper posture. *It makes comfort a fact instead of a promise.*

Careful workmanship insures an absence of all rough spots which might damage clothing. Protection for carpets and polished floors is afforded by the fibre floor contacts. (Leg tips of rubber, for added silence, may be had at slight extra cost.)

The "FOLD-UP" may be had in the same wide variety of frame colors and upholsterings as the standard model: Olive Green, Mahogany, Brown Walnut, Battleship Gray, etc.; with seats of Leatherette, Tapestry, Velour, or 3-Ply Weatherproof Veneer.

Perfectly Balanced

This illustration at the right, made from an actual unretouched photograph, suggests the sturdy construction and perfect balancing of the Beacon "FOLD-UP."



Send for Sample

Just fill in the coupon and pin it to your letterhead so that we can send you a sample Beacon "FOLD-UP" for comparison with others costing twice as much.

BEACON STEEL FURNITURE CO.

1841-1845 Carroll Avenue :-: :-: Chicago

Beacon Steel Furniture Co.,
1841 Carroll Ave.,
Chicago.

Please send a new Beacon "FOLD-UP" on 10-day approval, subject to return for full credit if not entirely satisfactory.

Color .....

Seat:
Wood ☐ Upholstered ☐

PLAN OF APPOINTING TEACHERS IN ST. LOUIS

(Concluded from Page 40)

part of the permanent records in the office of the department of instruction. In making up the final score 100 points are added to the preliminary score for an 'Outstanding' mark in the oral examination; 50 for a mark of 'Qualified but not Outstanding' and 0 for a doubtful result. The plan which is now in operation for the selection of teachers has been referred to in this recent attack as 'mechanical' and described as an 'automatic scoring machine.' I call attention, therefore, in particular to the large part played in the final score by the judgment of the oral examiners who have sat with the candidate and viewed him with particular reference to his *personal characteristics, professional ideals,* and his *special fitness* for the position sought.

A Study of Results with Reference to Residence

"In this scheme of examinations no question is raised as to religion, residence, or politics. The law of Missouri is clear upon this point in stating that teachers in St. Louis shall be appointed on the basis of *merit* and *merit only.* We do not believe that the lawmakers of Missouri ever contemplated that the factors of religion, residence, or politics should enter into the determination of merit. Fitness to teach does not depend upon the religious denomination with which one is identified; it does not depend upon the political party with which one is affiliated; neither does it depend, in any measure whatever, upon the particular city in which one may happen to live. In our rating scheme we have refused to permit the question of one's religion, politics, or residence to have any bearing upon the rating of an applicant. We are seeking to determine the *relative merit* of thousands of candidates for positions and we are by no means convinced that these are factors which enter into the determination of merit. It is interesting, however, to study the results of our examinations with reference to residence. During the school year just closed, the superintendent of instruction has recommended for appointment to the intermediate school rank 57 women candidates. The recommendations were based on the system of scoring as outlined above with the single exception that, in the case of teachers in the St. Louis system applying for higher positions full credit was allowed for all teachers above thirty years of age. An analysis of these recommendations shows that of these 57 women, 43 were teachers employed in the elementary schools and 7 of the others were residents of St. Louis. In other words, 50 of the 57 women recommended, during the school year just closed, for intermediate school positions may be classed as *home talent.*

"In the month of April alone, when the Superintendent appeared before the board asking for the appointment of 27 intermediate women teachers, 23 of this number were our own St. Louis elementary teachers and 2 of the others were residents of this city.

"We have analyzed the list of white women teachers who have completed their examinations for high-school positions in English, history, and social science. Taking the 10 highest of each group we find that 21 of these 30 women are now teachers in our own school system and 2 others are residents of this city, while 3 of the remaining are former St. Louis teachers seeking reappointment. This shows that out of a group of 30 women who are *at this time* promising candidates for high-school positions, St. Louis claims 26 or 86⅔%. This speaks well for our own product. It shows that many of our own elementary teachers have gone on beyond the requirements for teaching in the elementary school and have prepared themselves for work in the secondary schools of this city. It shows that our own people are able to stand up, *under competition,* with the best that the country has to offer. We do not need to legislate in favor of teachers in our city; they can maintain themselves under the *strictest form of competition.*

"The recommendations which I make to this board are going to be made, insofar as it is humanly possible to do so, on the basis of *fitness to teach.* I intend to recommend in accord with a list arranged in the order of merit, insofar as it is possible to make such a list. It then becomes an obligation of this board to approve the recommendation or reject the applicant. The board may reject on whatever ground it chooses."

BEWARE OF TOO MUCH THEORY

(Continued from Page 43)

To know how to teach is as important as to learn what to teach.

Too close an attention to books, to methods, to grades, to plans stultifies and stifles imagination. You can't teach without imagination.

One summer I decided that I would teach through vacation, and promote a group of children one half of a grade. They made it with ease, but when September came, both they and myself were devitalized, lacked interest in our work. We would have done far better work that winter if we had not done that summer stint.

Teachers need to relax, to fill their tanks of energy and of eagerness for different tasks. The superintendent who has taught only a little while does not realize how important vitality, imagination, color, and vividness are in a teacher's appeal to the children. In fact compared to that of the careful, conscientious teacher who has spent many years in the schoolroom, the knowledge of the theoretical superintendent is as sounding brass and tinkling cymbal.



FORMART
PREPARED CLAY MODELING

KERAMIC KILNS
also a DFC product, are recommended to preserve the work of the student. Write for Bulletin No. 360.

SEND FOR "FORMART BULLETIN" No. 340

MAMMA! See what I made!

Parents are vitally interested in the accomplishments of their children. Kiddies love to take home the little things they have made at school. These creations more than anything else help to stimulate the interest of the parents in school work.

Without doubt, one of the best and most liked parts of class work is the forming of shapes in clay. By using a modeling clay that will eventually harden, it may be preserved and fired, or, if desired, carried home.

FORMART—a true modeling clay—is reasonable in cost.

The old method of allowing the class to work repeatedly with the same piece of clay is being discarded. FORMART is so economical you can afford to give each student a fresh piece and the finished form can be preserved by the school or child.

The Denver Fire Clay Company

Denver ***Colorado***

SALT LAKE CITY ***EL PASO*** ***NEW YORK CITY***

The theoretical superintendent knows little about the real mind of the child. Unlike Froebel he has no time to walk and talk with children and learn from them. He takes another's word for authority. He fancies that the mind of the child is impressionable, plastic, ready and waiting for the knowledge of any kind that you choose to give him. Nothing could be farther from the truth. There is a time for different phases of knowledge. Before twelve the child is curious of the world about him. In early adolescence he turns to thoughts of himself. In all these phases he is a child happy in play, radiant with the joy of living. He is never a small adult preparing for grown-up days of responsibility.

If you would have his schoolwork mean something to him you must make it interesting and pleasurable. Nine times out of ten this is done through the personality of the teacher alone. Theories and methods don't have a thing to do with it.

Such interest of teachers is developed often by not trying to develop it.

That superintendent, who is merely an executive, who leaves some of the means and methods to the initiative of teachers, who counsels instead of commands, who consults instead of forcibly convincing, is often the most successful.

Kansas City, Missouri, and Kansas City, Kansas, both have splendid schools. I do not live in either community but I am acquainted with conditions in them. Each has had its superintendent nearly a quarter of a century. Both men are wise in their method of holding to old ideas which are good and being loath to adopt, in entirety, the new ideas without sufficient observation and testing of their efficacy.

Neither of these superintendents is a disciple of the new idea of wholesale experimentation—the adopt-and-discard method. Much of the success of these cities is based on the experience and the conservatively forward-looking policies of the superintendents of schools.

LEGAL ASPECTS OF RESIDENCE FOR SCHOOL PURPOSES

(Concluded from Page 46)

largely influenced by this fact, for the court examined at length the different statutes bearing on this point in school attendance.

In Commonwealth v. Upper Swatara Township School District (164 Pa. St. 603, 30 Atl. 507, 26 L. R. A. 581 [1894]) the court said: "The residents of one school district are not entitled to free admission to, and education in, the schools of an adjoining district. The taxes levied by a district are for the education of the children of that district, and are not applicable to the education of the children in another district."

Kentucky (Board of Education of Winchester v. Foster, 116 Ky. 484, 3 Ann. Cas. 692 & Note, 76 S. W. 354 [1903]) has held that where a child of school age, whose parents live outside of the state, goes to live with her uncle who has no authority over her and only assumes responsibility connected with her care while she resides in his family, is not a *bona fide* resident of the district in which her uncle resides so as to be entitled to free admission under the statute limiting benefits to *bona fide* residents. In this instance the girl's parents live in Virginia. An amended petition alleged that the child was to reside with her uncle as a member of his family until she was twenty-one and he was to provide for her until that time. But the court held that "there is no averment that her uncle is her guardian, curator, or committee, or that she has been apprenticed to him, or that he has any control over her, and that his assumed responsibilities in connection with her are only to continue so long as she resides in his family or arrives at the age of twenty-one."

Where there is a doubt, the courts seem inclined generally to resolve the doubt in favor of the child, especially if the parent, legally entitled to the custody of the child, has a domicile in the state. This, however, is not a uniform rule as has been noted.

In view of the increasing support of public education given by the state, and also in view of the fact that many of the cases cited above were decided before attendance had been made compulsory, it is probably safe to predict that courts in the future will tend to adopt the more liberal interpretation as already outlined. Hence, unless especially so stated in the statutes, residence, not domicile, will be the deciding principle.

A SIMPLE SYSTEM OF BUDGET CONTROL

(Continued from Page 48)

budget provisions, up to the end of the current month. This can all be done as soon as the budget has been authorized and the subdivisions worked out. The heavy black line beneath the monthly budgeted amounts, represents *actual expenditure*, and this line progresses daily, weekly, or monthly, as the case may be. It will be immediately evident to the reader that the first object attained is an instant comparison between *authorized* and *actual* expenditures, on the basis of equal apportionment of the annual budget. But another object is attained; we can see just what is the *available balance* for each item.

It must be understood, of course, that certain items do not lend themselves to *monthly* control. Printing, for example, is an expenditure which, when made, may wipe out considerably more than the proportion of the printing budget, covered by the first quarter—which is the

(Concluded on Page 150)

PROMINENT EDUCATORS FIND

The AMPICO

AN INDISPENSABLE PART OF THEIR SCHOOL EQUIPMENT

"The Ampico is already proving of considerable help to our teachers and affords no little pleasure to the students."
HAROLD RANDOLPH, *Director,*
Peabody Conservatory of Music, Baltimore, Md.

"The Ampico has greatly improved the work in our classes, and has given our students a view of the best in music literature that could be obtained in no other way."
HAROLD L. BUTLER, Dean,
College of Fine Arts, Syracuse University

"The Ampico in our school has undoubtedly been of great value, because of the highly artistic nature of the reproductions of the works of the great masters."
CHARLTON LEWIS MURPHY, Director,
Zeckwer-Hahn Philadelphia Musical Academy

"With the splendid additions you are making to your library of recordings, we are more and more able to extend the use of the Ampico to cover the pre-classic and ultra-modern periods."
ALEXANDER RUSSELL, *Director of Music,*
Princeton University.

"We find our Ampico useful in so many ways that it is difficult to enumerate them all."
H. C. MACDOUGALL, Professor of Music,
Wellesley College, Wellesley, Mass.

"The reproductions of the Ampico are as perfect as the artists' actual performance. It has been of inestimable educational value."
GEORGE FOLSOM GRANBERRY
Director, Granberry Piano School, N. Y.
Director of Music. University of Georgia Summer School

"In the professional music school, the Ampico makes it possible for those aspiring to public careers in music to become thoroughly and quickly acquainted with the greatest examples of creative and recreative art."
SIDNEY SILBER, *Dean,*
Sherwood Music School, Chicago, Ill.

"I find the Ampico a thoroughly sensitive and artistic medium, Its adequate repertory puts me in command of the essential materials of piano literature. Its contribution to the effectiveness of my work is a distinct one."
G. S. DICKINSON, Professor of Music,
Vassar College, Poughkeepsie, N. Y.

"The Ampico permits students and teachers the same ready access to musical literature as a library or an art gallery provides in other fields."
ROY DICKINSON WELCH,
Professor of Music History and Appreciation, Smith College
Northampton, Mass.

"I should like to express my keen satisfaction with the Ampico which is the latest piece of equipment added to our music department."
CHRISTOPHER J. THOMAS, Professor of Music,
Wells College, Aurora, N. Y.

"We have selected the Ampico after most careful tests. We believe it to be a superior reproducing instrument. Its library of music is most complete."
PETER W. DYKEMA, Professor of Music Education,
Teachers College, Columbia University, N. Y.

A preponderant majority of Schools, Colleges and leading Educational Institutions after comparative tests, have purchased the Ampico, finding that it alone provides:—A fidelity of performance comparable to the actual presence of the artist—A greater number of artists to illustrate musical appreciation courses (*practically every great pianist of modern times may be heard through the Ampico*) — A library of recordings embracing the full range of musical literature.

VIEWED FROM EVERY POINT, UNPREJUDICED ANALYSIS HAS DEFINITELY ESTABLISHED THE OVERWHELMING SUPREMACY OF THE AMPICO.

THE AMPICO CORPORATION
Educational Department
29 West 57th Street New York City

Build this Year's Program in Music around the Miessner with the Sono-Rim

Musicians proclaim it a revelation—school authorities find that it makes school work more pleasant for both pupils and teachers. Music supervisors universally endorse the Miessner as the ideal instrument for class piano instruction.

All the tonal qualities of the small grand have been duplicated, and even surpassed, in the improved Miessner with the Sono-Rim. This exclusive Miessner feature, built into the back of the sounding board, is a revolutionary development in piano building. The tone is actually superior to that of a small grand, in both quality and volume.

Like new type phonographs and radio sets, the little Miessner sets the pace in school pianos. You have to hear it to appreciate its true worth. Mail the coupon for complete information and trial offer.



NEW! The Miessner Junior
The Smallest Piano in the World!
⅔ the Size—⅔ the weight
—⅔ the Price of the
Standard Miessner

WRITE FOR FULL PARTICULARS

MIESSNER

THE LITTLE PIANO WITH THE BIG TONE

MIESSNER PIANO CO.
118 Reed St., Milwaukee, Wis.
Please send catalog describing the Miessner with the Sono-Rim and explain how I can hear it played through your 10-day trial offer.

Name.....

Position..... School.....

Address.....

City..... State.....

(Concluded from Page 148)

period covered by the chart, to date. On the other hand, in the matter of administrative salaries, not more than $1,800 may be expended for this item, up to March 31. The book item offers another variation. According to the chart no expense has yet been incurred for this item, but it is quite possible that a new supply of books will be purchased at the end of June, say, which will wipe out the entire appropriation for this purpose.

Some items of expenditure may reveal possibilities of permanent saving, when presented in this form. For example, assuming that postage, telephone, and telegraph expense is fairly steady and does not fluctuate much from month to month, it is evident that with a $5 saving effected up to March 31, there exists the possibility of making a permanent saving on these items, if they are watched. The same might apply to office expense. The teachers'-salaries item needs watching. The excess may be due to substitute teachers—it would not be due to statuary increases in salary, since these would all be taken into account when budgeting for teachers' salaries—but it offers an opportunity for investigation. In the matter of school supplies, the excess expenditure does not mean anything yet, for the reason that supplies are purchased to cover future needs. Clerical salaries are advancing too quickly, and an explanation should be demanded, or known.

The Value of the Chart

These are just a few illustrations of how useful a chart of this character may be, if kept up-to-date and based on proper records. It should be hardly necessary to mention that the "expenditure" indicated in the chart, must be based on *liabilities incurred,* and not only on *disbursements made.* Then as to what objects of expenditure should be visualized in this manner, this is a question to be decided only by the superintendent himself. It will hardly be necessary to include every item of expense, even when covered by the budget. For example, administrative and supervisory salaries, as a rule, do not permit of the slightest deviation from the budget, so that there is no necessity to show these. On the other hand, there are many items not shown on the chart which it would be very necessary to include; maintenance and repairs, for instance, is a prolific source of trouble to most school superintendents, and needs very careful watching.

Even the superintendent who does not have to submit to budgetry control, would profit by the use of this chart and could establish an unofficial budget as an experiment. He would soon discover, then, the value of governing one's expenditures by *standards.* A well-known school superintendent who is renowned for his outspokenness, said recently, at a public gathering, that the superintendent who does not insist on running his office, as well as all the schools under his jurisdiction, on a budget, is mad. Strong language, but who shall say it is not justified?

This method is a good one also for keeping track of expenditures against appropriations—by which I mean, the legislative appropriations, which so often are classified in a manner utterly unscientific and useless for costing purposes, but which are imposed on the school department, and by which accordingly it must govern its expenditure.

And so it is by such simple methods that information, vital in character and necessary to the conduct of school business, may be recorded in such a way as to convey its full meaning, and at the same time provide a guide for future action and policy.

TO WHAT EXTENT SHALL SCHOOL BOARDS LISTEN TO POPULAR CLAMOR?

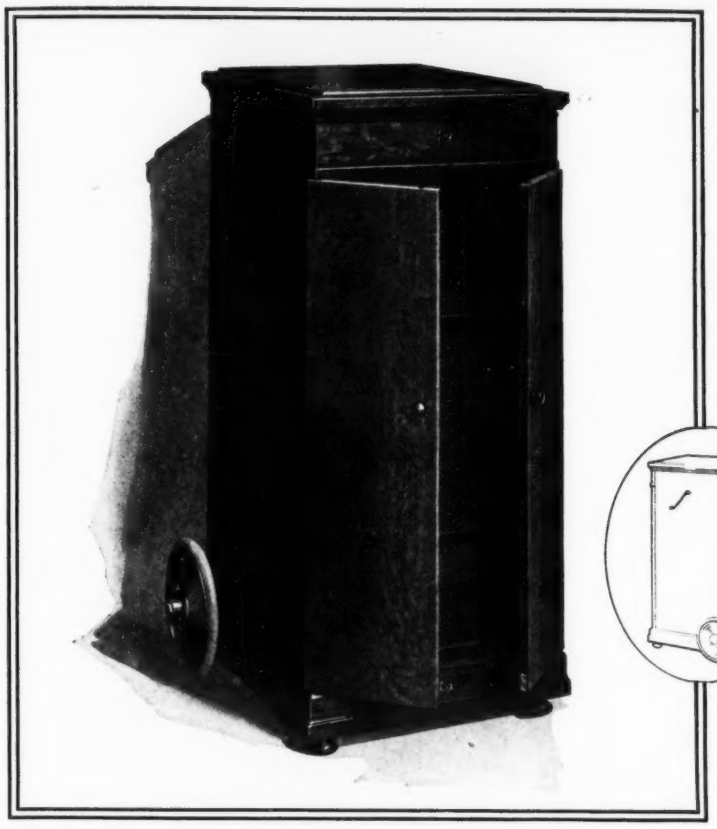
(Continued from Page 52)

Practically every one is in sympathy with the belief that in a large measure public officials should be left to act on their own initiative and according to their own best judgment, with some exceptions, of course, so long as it does not concern local affairs. But our local officers are so close to home, it is so convenient to tell them just what ought to be done in a given case, that a great many people seem to feel that they should be "heard" in all matters pertaining to local governmental affairs. Especially are they desirous of telling the school board what should be done and what should not be done.

There are more people than one might think on casual deliberation that seem to feel that they have left a duty unperformed if they do not annually prescribe a list of "do's and don'ts," for the school board to follow in their administration of the affairs of the school. And it is rather strange that a good many of these folks would never dream of dictating to any other officer except a school official. How often in the course of a year are school-board members admonished to bring about a decrease in the district budget. "The taxes are just getting to be a sight." How familiar this phrase is to rural school boards. Or if a teacher or principal fails to cater to the whims and caprices of some individual of local prominence and influence the board receives a visit, a grievance against said teacher or principal is presented and, if the board refuses to take action in the manner directed, an attempt is made to oust the offending member or members at the polls.

Of course, the board at all times should have the interest of the people at heart. This is an old remark, but it is just as true today as when it first was made. But to work in the interest of the public and to follow literally the clamorous demands that a part of the public makes during periods of local excitement is entirely different. One agitator in a community, who understands the reactions of local people to

(Concluded on Page 153)



Play beautiful music every day. If the child can only hear music—he will love it. He will appreciate it, distinguish what is finest, and have an intimacy with real beauty.

With this new

SCHOOL ORTHOPHONIC VICTROLA

you hear the most beautiful music of the world exactly as it is

WE CANNOT tell you enough of the utmost clarity of tone of this new Orthophonic Victrola for schools. You hear music exactly as it is—it seems emerging direct from the throat of the singer or dramatic speaker, or from the clear instruments of the orchestra. The School Orthophonic has the Victor exclusive principle that gives out every tone *pure*. Rich, full volume. Hear it for yourself.

You should also see this lustrous-oak cabinet in early Italian style. It has every proved necessity for school use! Rear wheels move the Victrola easily from room to room, and they lock automatically at rest. The needles cannot spill even when the Victrola is carried up the stairs (it is very easy to carry!). The cover lowers itself in silence. A portion of the back lifts into a shelf—your own desk. The Victrola stops automatically when the record is finished. And you can lock both doors and the cover to prevent tampering. . . . School price $165. Arrange a payment plan with your Victor dealer. Or write us.

There are now New Orthophonic Records for every class in every grade in school. Fresh, inspiring music! Complete list, to date, on request. Hear these!

SONGS FOR CHILDREN

The Sandman; 2. *Spinning Song* (Grant Schaefer); *Slumber Boat; The Top; The Fairies* (Gaynor) —ANNA HOWARD . . . . . **20738—75c**

The Nightingale (Garrett); *Sky Music* (Norfolk Chimes); *Pull a Cherry* (French); *Swing Song; Fiddle-dee-dee* (Old English); *The Postillion* (Taubert); *The Dairy Maids* (Old English); *My Banjo* (Italian)—EDNA BROWN . . **20744—75c**

RHYTHMS

Rhythm Medley Nos. 1 *and* 2 (Anderson)— VICTOR ORCHESTRA . . . . . **20526—75c**

Motive for Skipping; Theme for Skipping; Camp of Gypsies — VICTOR ORCHESTRA . **20736—75c**

ORIGIN OF PATRIOTIC SONGS

Yankee Doodle—Violin (Old Jig); *Violin* (Old Nursery Rhyme); *Piccolo and Drums; Full Band. Dixie—Banjo, Tambourine, Clappers; Piccolo and Drums; Full Band*—VICTOR BAND . **20166—75c**

STUDY OF INSTRUMENTS OF THE ORCHESTRA

Instruments of the Orchestra—Strings; Woodwinds; Brass; Percussion—VICTOR ORCHESTRA **20522-20523—75c each**

ACCOMPANIMENT FOR GROUP SINGING

America the Beautiful (Bates-Ward); *Battle Hymn of the Republic* (Howe-Steffe); *Columbia the Gem of the Ocean* (Thomas A. Becket)—pipe organ by MARK ANDREWS . . . . . **20475—75c**

SONGS FOR JUNIOR AND SENIOR HIGH SCHOOL

Hark! Hark! the Lark! (Cymbeline)—LAMBERT MURPHY; *Who is Sylvia* (Two Gentlemen of Verona) (Shakespeare-Schubert) — ROYAL DADMUN **4008—$1.00**

NEGRO SPIRITUALS

Good News; Live a-Humble—TUSKEGEE QUARTET **20520—75c**

INSTRUMENTAL MUSIC FOR JUNIOR AND SENIOR HIGH SCHOOL

Hansel and Gretel Overture (Humperdinck)—SYMPHONY ORCHESTRA UNDER ALBERT COATES **9075—$1.50**

The Educational Department

VICTOR TALKING MACHINE COMPANY CAMDEN, NEW JERSEY, U. S. A.



They're Better Looking and Better Citizens if they never have to wear..

SPECTACLES! And so often proper conditions in the school room will prevent the trouble. Clean blackboards—that are really black—when written upon with white chalk, can be seen easily. Dirty blackboards, even with perfect lighting conditions, strain the eyes of all but the nearest students.

Glare—from blackboards covered with layers of chalk—should not be tolerated. Use Sana-board to keep them clean. Economical, easy to apply, and efficient—and harmless to the blackboard surface. Get the story now.

Write for folder about

Sana-Board

Easy to Use

Just a jelly glass full of Sana-board to a bucket of warm water. Apply with a cheap, rough sponge or cloth. No rinsing required.



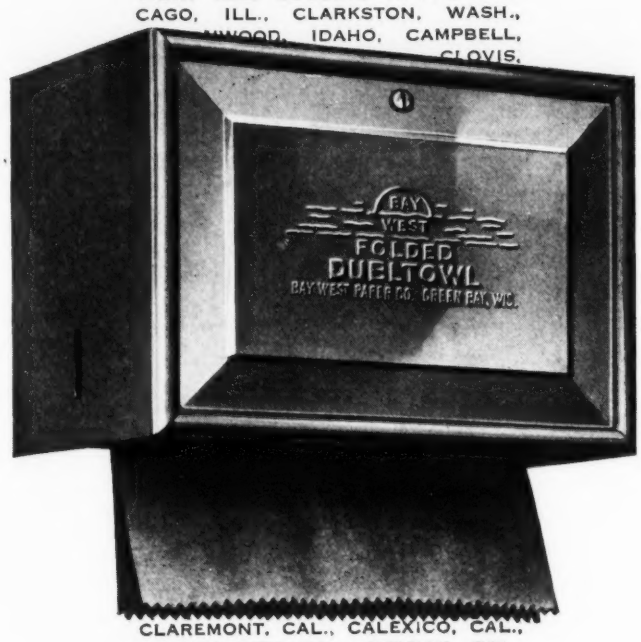
Costs but Little

The saving of a single child from glasses means more than the cost for many years—yet it is not expensive.

The HUNTINGTON LABORATORIES, Inc

HUNTINGTON, IND.

AUBURN, WASH., ARCHER, IA., ASOTIN, WASH., ATASCADERO, CAL., ARROYO GRANDE, CAL., ATWATER, CAL., ARTESIA, CAL., ANAHEIM, CAL., BELLE VERNON, PA., BLACK CREEK, WIS., BEVERLY HILLS, CAL., BALTIMORE, MD., BEACON, IA., BANNING, CAL., BRAWLEY, CAL., BELLFLOWER, CAL., BREA, CAL., BURLINGAME, CAL., BROADVIEW, ILL., BUCODA, WASH., CHICAGO, ILL., CLARKSTON, WASH., [illegible]WOOD, IDAHO, CAMPBELL, [illegible] CLOVIS,



CLAREMONT, CAL., CALEXICO, CAL., CULVER CITY, CAL., COLTON, CAL., CLEARWATER, CAL., COMPTON, CAL., CORONADO, CAL., CHANNING, MICH., COLUSA, CAL., CLOVERDALE, CAL., CORNING, CAL., CROMWELL, WASH., COLUMBUS, OHIO, CALWA, CAL., CHINO, CAL., DENMARK, WIS., DOVER, MINN., DELANO, CAL., DINUBA, CAL., DOWNEY, CAL., DAVIS,

In City After City Throughout America

Dubltowls Win Nation-Wide Acceptance in Schools

Dubltowls have won a place in the schools of the nation seldom if ever equalled by any product in so short a period of time. Since their introduction scarcely more than a year ago, Dubltowls have gained acceptance as standard equipment in schools, in more than 300 towns and cities.

Two big reasons stand back of this nation-wide trend toward Dubltowls—greater economy and better service. Dubltowls stop waste! Their economical size, rapid absorbency and genuine all-kraft material eliminate the need for a second helping by users. Soft, strong, they readily dry hands and face. Provide a far more satisfactory service at lower cost.

Dubltowls are dispensed from the cabinet illustrated or your own standard equipment. Try them in one or two schools and prove their economy and merit. Write today for samples, prices and name of nearest jobber.

Request on your letterhead will bring a Bay West Wash-Up Kit—a novel combination of soap sheets and Dubltowls to fit the door pocket of your auto.

BAY WEST PAPER CO., Green Bay, Wis.

BAY WEST DUBLTOWLS

"ONE DUBLTOWL WIPES DRY-TRY IT"



The beautiful, modern home of Wichita High School, Wichita, Kansas.

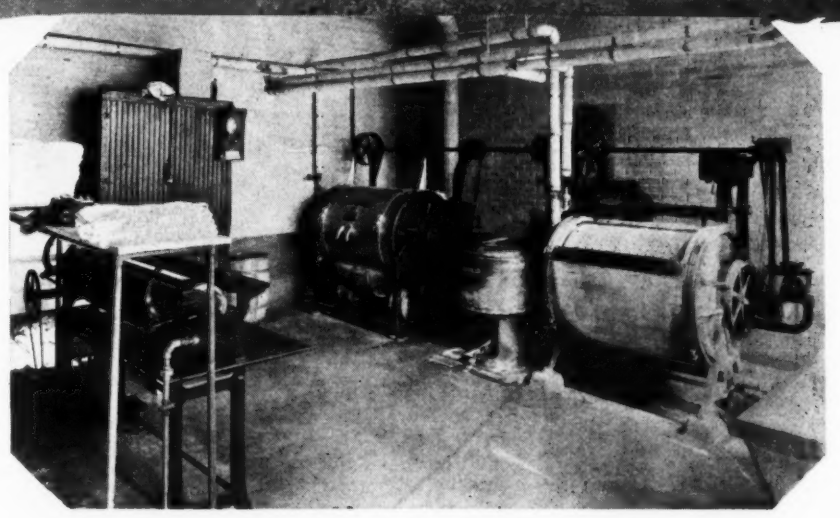
"Wichita High" operates its own laundry

—*and Wichita High knows it pays!*

THE officials of this splendid high school, at Wichita, Kansas, have found that their "American" laundry, operated under their own supervision, is a highly profitable investment.

You will enjoy new and profitable advantages, too, when you install one of these modern "American" departments in your school. Gymnasium uniforms, bathing suits, towels, cafeteria linens, etc., will be washed and ironed perfectly—much more economically than you imagine. And, because of the speed with which these articles are returned to service, you can operate with a much smaller reserve stock.

It will pay you well to investigate. Write, today, for full particulars.



The compact, economical "American" laundry which handles perfectly the daily accumulation of linens and uniforms at Wichita High School.

THE AMERICAN LAUNDRY MACHINERY COMPANY
Norwood Station, Cincinnati, Ohio

The Canadian Laundry Machinery Co., Ltd.
47-93 Sterling Road, Toronto 3, Ont., Canada
Agents: British-American Laundry Machinery Co., Ltd.
Underhill St., Camden Town, London, N.W.1, England

(Concluded from Page 150)

certain kinds of argument can many times control public sentiment to a surprising degree in carrying some point in which he is personally interested.

The memory of Davy Crockett stands today a symbol of courage and uprightness. He was a hunter and not a school-board official, but his philosophy of life as embodied in his motto, might prove a help and an inspiration to the school official who stands at the parting of the ways where one course represents public sentiment, and where the other, though leading in an opposite direction may represent common sense and sound judgment. "Be sure you're right and then go ahead," said Crockett. Many times such a course will lead to temporary disapproval, but the official who does this and who is not constantly swayed back and forth, so to speak, in his sentiments in a vain endeavor to please every one will be the one who in the end will accomplish something for the school and will not only win but will hold public approval.—*F. Y. Harper.*

A SUPERINTENDENT'S OFFICIAL LETTERS—III

(Continued from Page 56)

that the principal need not work to make her or him a better teacher. I wouldn't give you such teachers if I could because teachers grow to good teachers under the influence of the principals and are not furnished ready-made.

It is important that principals shall know their pupils and their pupils' needs so far as possible, but it is absolutely necessary that anyone who attempts to supervise the work of teachers shall know their teachers and their teachers' needs. This knowledge which is essential to intelligent and successful supervision cannot be acquired in the principal's office, although much study of problems, checking of results, and preparation of plans must be done by the principal in the office. Neither can this knowledge be acquired in teachers' meetings, although teachers' meetings properly conducted are an essential part of administration and supervision because these meetings deal with the teachers' problems and the general problems of the school. The place where the supervisor must come to know the teachers and their problems and needs is in the classroom. There is no substitute for this procedure in successful supervision.

Personal conferences are necessary in order to establish confidence between teacher and principal. If it is necessary to give adverse criticism it should not be given while the class is in session. Adverse criticism of an individual teacher should never be expressed in a teachers' meeting. If possible the principal should offer some commendatory criticism along with the other. Principals should never send or leave notes of adverse criticism. I know of nothing that can be a greater source of friction and misunderstanding than the note-sending habit. Teachers regard note sending as taking an unfair advantage of them. They resent it because it leaves no opportunity for explanation.

I suggest that all principals hold teachers' meetings in their respective buildings on Monday, September 13. This is the usual custom, and I expect you would do so without any suggestion from me. In fact, all of the suggestions I purpose to make in this letter would undoubtedly be carried out by most of you, and most of them by all of you even if I did not write them out, but maybe some of them will be helpful to some of you.

Suggestions

1. If possible place in the hands of each teacher such regulations as the teacher needs to have for her guidance in the mechanics of her schoolwork. You cannot cover all points, but such things as directions for conducting fire drills, dismissals, time that teachers are required to report in their rooms, etc., etc., are some of the things that should be made clear immediately.

2. The customs and regulations regarding corporal punishments and other forms of punishment should be called to the attention of the teachers in the first meeting.

3. See to it that one of the well-known teachers, or the principal, introduces new teachers to all the other teachers in the building. Make the new teachers welcome.

4. Have frequent fire drills during the early fall, and have the first one not later than the second day of school. The local fire department will visit the school buildings early in the fall term for the purpose of inspection of fire hazards and to make suggestions regarding fire drills. It may be that you will want to drill your first grades in passing before you include them in general fire drills.

5. Inspect your school buildings thoroughly on the first day of school, including basements and boiler rooms, and make any needed requests to the janitor in regard to conditions. Insist on cleanliness, neatness and orderliness in basements, including the boiler room.

6. Please send in to the office any change of address or telephone number as soon as the change is made.

7. Some time early in the term take up with your teachers the subject of membership in the teachers' club. Every teacher should join, but the building principal should be the leader in presenting the matter in such a way that the teachers will recognize not only the obligation to support the club, but also the real professional, social, and financial value of a strong teachers' organization.

Very truly yours,
The Superintendent of Schools.

The Correct Shades For Your School



THE AIR-an-LITE DOUBLE ROLL SHADE.
Patented

Write us for estimates on school shades. We can furnish many different types of shades made with MAXWELL'S "LIFETIME" CANVAS, or any other standard shade cloth.

Educators know the importance of selecting the correct Window Shades for schools.

The AIR-an-LITE School Shade is invariably the choice of those who make a careful study of school lighting and ventilation. It is scientifically correct, built to last, simple in construction, strong and durable.

The AIR-an-LITE, and many other types of school shades, are described in our booklet "MODERN SHADING." It will be sent to you free, without obligation. WRITE FOR IT TODAY.

THE SHADE SERVICE BUREAU
A SUBSIDIARY OF
S. A. MAXWELL & CO. INC.
3636 Iron St. CHICAGO

SCHOOL BONDS AND BONDING METHODS —A DISCUSSION BASED ON THE BONDED SCHOOL DEBT OF THE STATE OF ARIZONA

(Continued from Page 67)

dent when these figures are applied to certain counties, and to the state.

Two Extreme Policies

The two counties with the largest bonded indebtedness follow opposite bonding policies almost exclusively. Maricopa county has issued $3,660,000 in the form of term bonds which will cost her $7,690,000 at 5½ per cent before they are retired, and, in this county the districts do not receive interest on sinking funds to reduce this total cost to the taxpayer. The same bonds would have cost $5,750,000 on a serial plan at 5½ per cent. There is a difference of $1,940,000 to the taxpayer between the two policies. Very good reasons would have to be given to justify the continuance of the bonding policy of the past.

Pima county on the other hand has issued $1,640,000 in serial bonds which will cost $2,570,000 before they are paid off. These same bonds would have cost $3,440,000 at 5½ per cent if issued on a term plan. Pima county's past bonding policies have saved her taxpayers close to a million dollars.

When similar comparisons are made with respect to the bonded debt for the state we begin to grasp the significance of bonding policies to taxpayers, and the urgent necessity of regulating bonding practices by statute.

TOTAL COST OF EXISTING BOND ISSUES IN ARIZONA AS COMPARED WITH TOTAL COST IF ISSUED AS SERIAL BONDS

	Term	Optional	Serial	Total
Amount of existing issue..	5.4	2.7	2.7	10.8
Total cost at average rate of 5½%	11.3	5.00	4.25	20.55
Total cost if issued as serials	8.5	4.25	4.25	17.0

Note: In the estimates it was assumed that optional bonds were retired serially after the tenth year. This assumption is far too liberal, as experience has shown that the option privilege is rarely exercised and the majority of these bonds run full term. The optional type of bond is still more undesirable than the term bond since it does not bring as good a price and the district pays extra for a privilege which is not used.

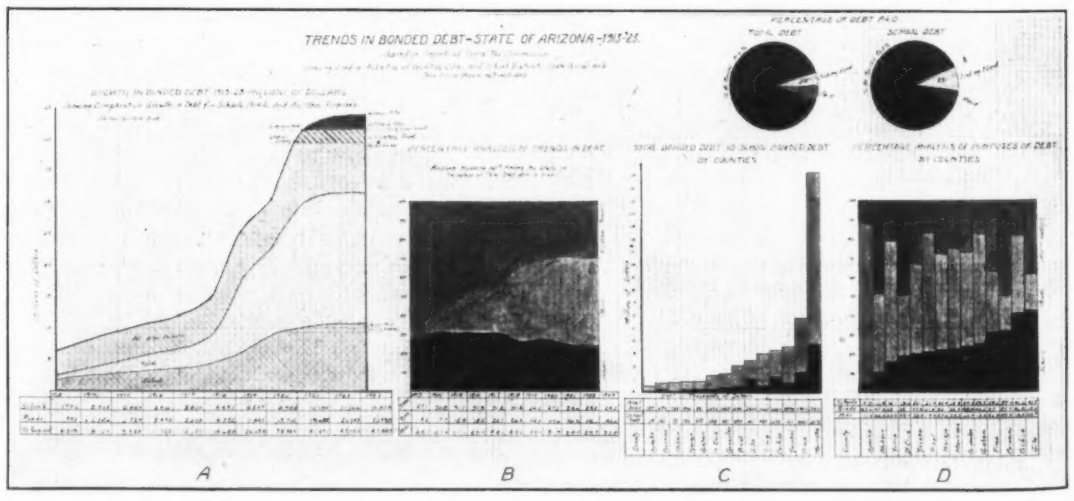
Past bonding policies have cost approximately $3,500,000 more than a policy of issuing straight serial bonds would have cost. It is true that interest earned by sinking funds decreases this excess charge somewhat in part of the counties, but when full credit is given for this, there is still an excess cost of $1,500,000 to $2,500,000, depending upon the method of raising the sinking fund. The present condition of sinking funds indicates a tendency to raise them over a ten-year period with the result that the $2,500,000 excess charge is more nearly a true excess than the smaller figure.

It is not of great significance, however, whether the excess charge has been $2,500,000 or some other large figure. The important consideration is that bonding policies have a decided important effect upon tax burdens, and that past haphazard bonding policies have been far more expensive than a different kind of policy would have been. The adoption of wasteful and unsound policies has not been deliberate; they are the result of inertia, precedent, and ignorance. The majority of school-board members do not realize the significance of the type of bond issued, and guidance in this respect from some informed supervisory official or by statute is imperative. Future extravagance from the unnecessary expenditure incurred through poor types of bond issues may easily be prevented through the enactment of a law prescribing the serial-bond plan.

High Costs Give Concern

The high cost of education in recent years is causing no little concern to school administrators and to taxpayers. Fixed charges in the form of debt service are absorbing increasing percentages of current revenues and reducing

(Concluded on Page 156)



TREND IN THE BONDED DEBT OF SCHOOL DISTRICTS IN THE STATE OF ARIZONA.

These leading restaurants have united on the VULCAN

At the Buffalo Show Booth 123-124 see the demonstration of Vulcan Hot-Tops



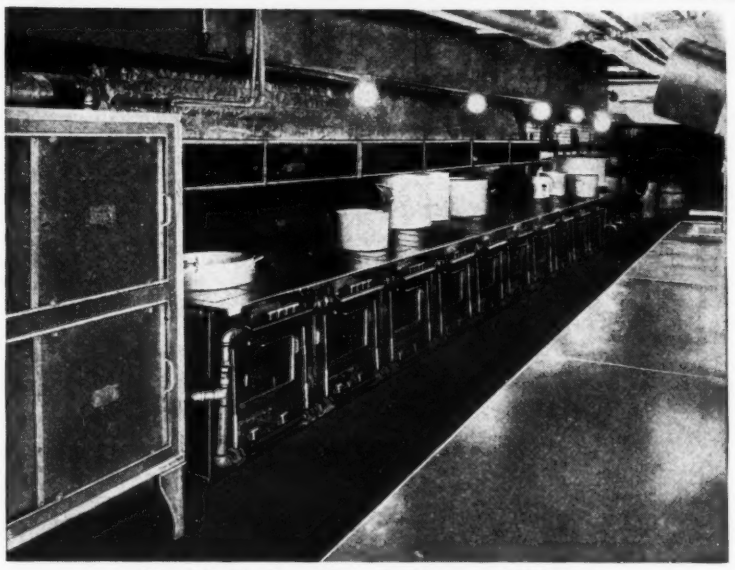
"L" Cafeteria, Portland, Oregon. Portland is proud of the "L" and the "L" Cafeteria is strong for the Vulcan. Installation by Portland Gas & Coke Company.



Maillard's, New York City. A beautiful dining room, and one of New York's foremost! Vulcan installation by L. Barth & Company.



The Georgian, Coolidge Corners, Brookline, Mass. A popular restaurant noted for excellent food.



Henrici's kitchen. Note the battery of Vulcans!

DOES this mean anything to you? Successful restaurants, from coast to coast, are depending more and more on Vulcan Hot-Top Gas Ranges for better cooking results. The list of Vulcan restaurant installations makes up a veritable hall of restaurant fame. Each year this preference is boosting the Vulcan sales to new records in volume.

Before making a decision, you owe it to yourself to check up the features that make Vulcan the preferred range for preferred restaurants:

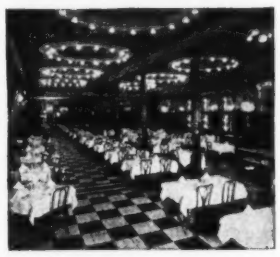
1. The Vulcan has special, exclusive features; the aeration plate over each burner—the perfect 4-ring control and the center red hot spot with graduated heat zones. 2. Economy! Food saved and fuel costs reduced. 3. Vulcan means greater durability and longer life. 4. The Vulcan name is a reliable guarantee. 5. Vulcans are made in styles and sizes best suited to your needs. 6. Maintenance costs are surprisingly low.

Whether you are re-equipping an old kitchen, planning a new one, or just thinking it over, you should have all the Vulcan facts before you. Just send for your free copy of the Vulcan book. Hotel Department, Standard Gas Equipment Corporation, 18 East 41st Street, New York.

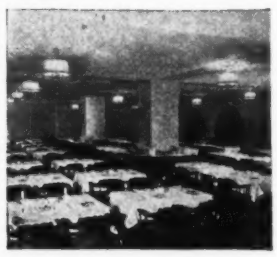
Pacific Coast Distributor: Northwest Gas & El. Equip. Co., Portland, Ore., San Francisco, Los Angeles

VULCAN GAS HOT TOP RANGES

Remember to see Booth 123-124 at Buffalo National Association Restaurant Convention



Henrici's, Chicago, Ill. Most people who love good food, whether in New York or San Francisco, know of this famous eating place. The Vulcan installation does its bit. Installed by People's Gas Light & Coke Company.

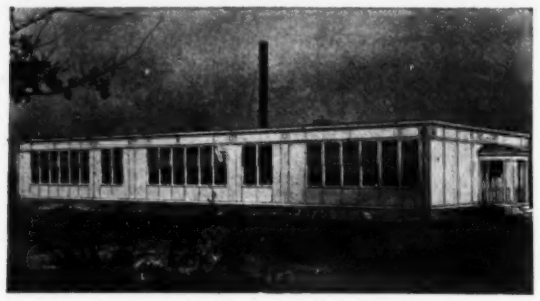


Restaurant in Barclay Vesey Building, New York City, for the employees of the New York Telephone Company. Feeds 4,000 people daily in two hours. Vulcan-equipped. Arkay Co., New York.



Polly Tea Room, Wrigley Building, Chicago, Ill. The Vulcan equipment was installed by the People's Gas Light & Coke Company of Chicago.

STANDARD GAS EQUIPMENT CORPORATION



PARAPET WALL 6-ROOM SCHOOL
HAMMOND, IND.

Two styles—Parapet Wall and Gable Roof.

Made in 1, 2, 3, 4, and 6-room units.

Austral Windows (Ventilation without draft)

Well insulated

Easy to erect

Wanted–More Room

The fall term is beginning and many schools are finding the enrollments beyond their anticipation. What is to be done with these pupils that the present housing facilities cannot accommodate?

American Portable Schools have been answering that question definitely for 25 years—until school authorities have come to look upon these sturdy pleasant-to-work-in buildings as delightfully economical alternatives of the permanent school building.

There is still time to erect an American Portable before school gets fully under way, and the time is just right to start negotiations for the American Portable Gymnasium for the basketball season. Just tell us how many pupils you wish to seat in either and we will wire you the cost and shipping time.

AMERICAN PORTABLE HOUSE CORP.
601-611 Alaska Street Seattle, Washington

REPRESENTED BY

H. R. Shepherd, 7331 Coles Ave., Chicago
The Acme Company, 19-21 West Third St., Cincinnati, O.
American School Supply Co., 415 Chestnut Street, St. Louis, Mo.
A. M. Blood, Rock Island, Ill.
W. I. Johnson, Waynesburg, Pa.
Henry Wiggs, 1649 Nostrand Ave., Brooklyn, N. Y.
Sales Incorporated, Easton, Pa.
Virginia School Supply Co., Richmond, Va.; Charleston, W. Va,
Educational Supply Co., Painesville, O.
T. R. Woodburn Co., Terre Haute, Ind.
C. F. Weber, 601-609 Mission St., Cor. 2nd, San Francisco, Calif.; 6900 Avalon Blvd., Los Angeles, Calif.

AMERICAN PORTABLE SCHOOLS

(Concluded from Page 154)

the amount available for current maintenance. We have observed from the bonding situation in this state that no small part of the debt service charge is due to unwise and expensive bonding policies. One authority states that it is safe to say that 25 per cent of the expenditure for interest for term bonds might well have been saved. This estimate applied to Arizona where three fourths of the bonded debt is in term or optional bonds, means that the state is now paying an excess interest charge of $100,000 per year as penalty for neglect of bonding policies.

The importance of a law compelling the use of the serial form of bonds is beginning to be realized by various states. Legislative action has already been taken in at least thirteen. New York, Massachusetts, Wisconsin, Delaware, Idaho, Kansas, New Jersey, North Carolina, Ohio, Vermont, West Virginia, Washington, and New Mexico, now have statutes requiring the use of serial bonds, while Florida and Missouri have prepared bills looking to the same end.

Bonded debt is thus becoming recognized more and more, as a vitally important item in school finance and the necessity of developing sound financial practices in this field needs no argument.

The term plan of bonding came into extensive use because it was the older of the two schemes, but the development of the serial plan has brought with it so many advantages that there is no longer any valid excuse for tolerating or permitting the issuance of the unwieldly, wasteful, and extravagant term bond. Authorities are unanimous in recommending the serial plan; experience has demonstrated its superiority; bond buyers prefer it; and simple economy demands its exclusive use.

Term Bonds and Serial Bonds Contrasted

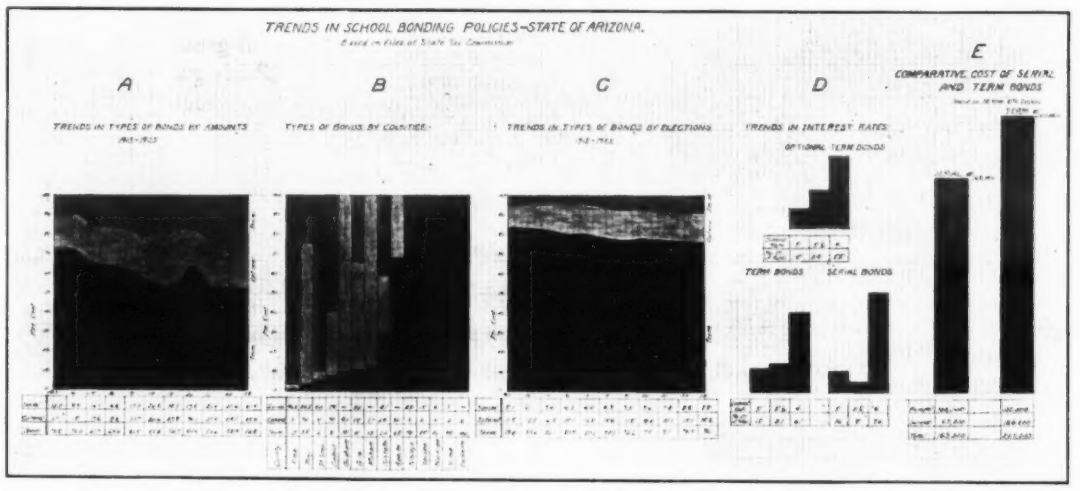
In short, we find the term bond which has characterized Arizona's bonding policy in the past, indicted as undesirable for public bond issues because:

1. It is costly and wasteful.
2. It does not command the best price.
3. It does not find as ready a market.
4. It is unwieldy and complicated in calculations and in accounting.
5. The plan is seldom carefully followed.
6. The sinking fund is liable to neglect, misappropriation and depreciation.
7. It leads to refunding practices.
8. It is condemned by authority, by practice, and by experience.

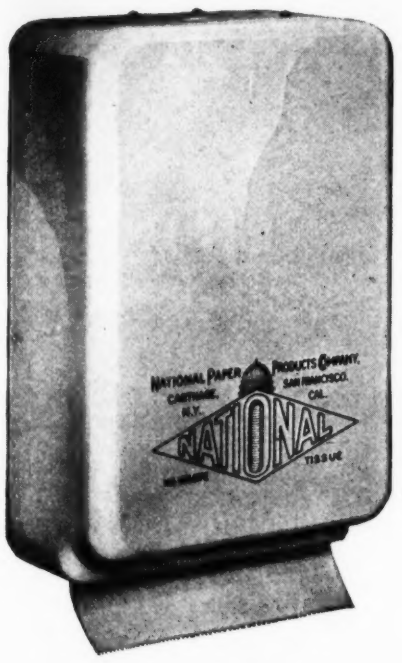
On the other hand we find the serial plan growing in favor because:

1. It is sound financially.
2. It is cheapest to the borrower.
3. It is favored by bond buyers and commands the readiest market.
4. It is simple in administration, requiring no accumulation.
5. There is no sinking fund subject to abuse, neglect, depreciation.
6. Payments cannot be omitted or postponed; they must be met when due.
7. Danger of refunding is removed.
8. The debt burden is easily adjusted and permanently fixed.
9. The security of the bond, the credit of the district, improve with age.
10. It represents maximum safety with minimum expense and is recommended by authority, experience, and practice.

Conditions found in Arizona verify results found in other states, and emphatically indicate the necessity of a serial law for this state. School districts must continue to borrow, but it is fundamental to sound school administration that boards of trustees charged with the issuance of bonds shall be protected from further needless expenditure, and that they shall be guided into sound bonding policies.



TRENDS IN SCHOOL BONDING POLICIES IN THE STATE OF ARIZONA.



A New and Economical

Porcelain Steel Cabinet

A BRAND-NEW design of No-Waste toilet tissue cabinet—steel with porcelain finish—uniting beauty and practicality in high degree. Strong, unbreakable, durable and ornamental. Can't be scratched nor written on. Easily cleaned with damp cloth. It enforces economical use of paper by its delivery of interleaved double sheets through a slot. Has no mechanism whatever; can't get out of order. Quickly and easily refilled, even though part of existing supply remains. Very reasonable in price.

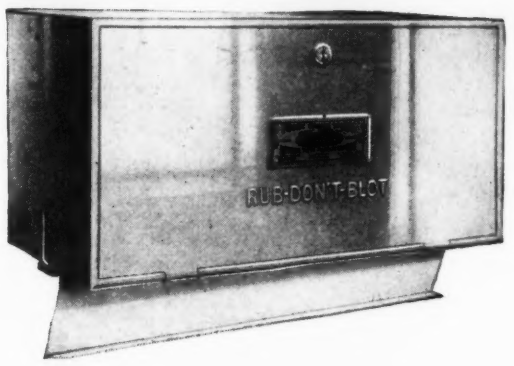
The No-Waste toilet tissue furnished for this cabinet is made from pure selected paper pulp, scientifically manufactured for this use and no other, and is packed by automatic machinery. It combines softness and strength effectively and is remarkably absorbent. A pleasant and highly sanitary product, used by large numbers of discriminating purchasers. Nothing better, nothing more economical, can be found at any price.



NO-WASTE TOILET TISSUE

Distributed by leading supply houses in all principal cities. Details and name of nearest distributor will be mailed on request.

National Paper Products Company
CARTHAGE, N. Y.



Notice the Doubled Edge On This Paper Towel

THE doubled edge is called the "hem," and is a patented feature found only on PUBLIC SERVICE paper towels. No other paper towel has it. It prevents the paper from tearing when grasped by wet hands—a great convenience and economy, fully appreciated by the thousands of present users of these towels.

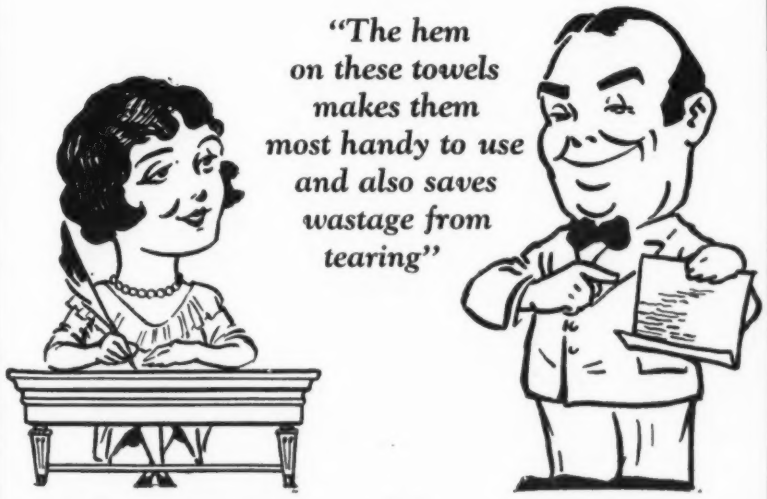
The PUBLIC SERVICE cabinet [shown above] is another very practical invention. It contains no mechanism of any kind, therefore is never out of order. The towels pass out through a slot, one at a time. Each, by means of interleaving, pulls out the edge of the next, in position to be grasped. Wastefulness is discouraged, yet withdrawal is convenient.

The towels are firm and absorbent, almost cloth-like. One or two will dry the hands perfectly. Their high efficiency makes them extremely economical.

PUBLIC SERVICE towels should be investigated by all buyers who want to get the most value at lowest possible annual cost.

Full information, samples of cabinets and towels, and address of your nearest source of supply, gladly sent on request

National Paper Products Company
CARTHAGE, N. Y.



Public Service PAPER TOWELS

FOR IMMEDIATE SHIPMENT!

ANY NUMBER OF SEATS OF THE FAMOUS SAFE STEEL

WAYNE GRANDSTANDS

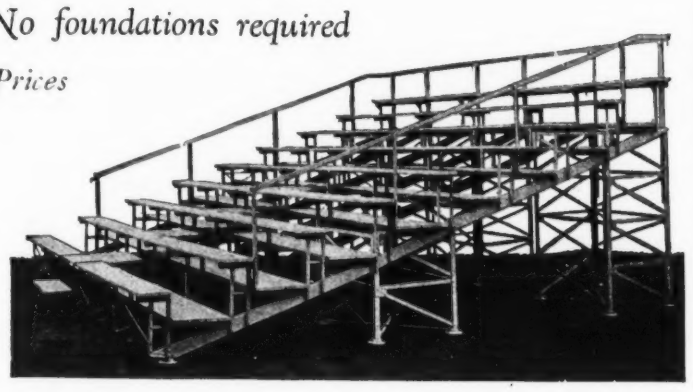
RECOGNIZED as the most satisfactory and trustworthy portable stand.

THE Wayne stand on your field this Fall will provide safe, comfortable seats for spectators. After the football season it can be removed to the gymnasium and in the Spring on to the field again for baseball.

Easy to erect *No foundations required*

Write or Wire for Catalog and Prices

WAYNE IRON WORKS
Lincoln Highway and Pembroke Avenue
Wayne, Pa.
Distributors in Cambridge, Mass., Columbus, Ohio, Chicago, Detroit, St. Louis, Baltimore.



Wayne Stands for Safety

HOOVER OPPOSES FEDERAL DEPARTMENT

A clue to the attitude of some members of the present administration in Washington toward the creation of a secretaryship in education in the cabinet is contained in an interview given by Herbert Hoover to the Yale *News*. The *News* quotes Secretary Hoover as saying:

"In spite of frequent agitations for this change, I can see no critical condition or pressing need in the educational situation to warrant such a step.

"There are weighty considerations, furthermore, which make inadvisable the creation of a secretary for the cabinet. To begin with, the cabinet by design is essentially an advisory council to the President; its size is already too large to efficiently fulfill its purpose. The only excuse for the appointment would be to provide another councillor, but the President already has more than enough.

"I do not intend to convey that education does not deserve every stimulus and encouragement in our power, but I am convinced that the step is inadvisable and not greatly to the benefit and advantage of education. Under its own sails the greatest industry in the country is now accomplishing results which rival those of any people in the world."

"American education," the Secretary said further, "has a great future in store. In the maintenance of its present pace of growth and development I look for a gradual and steady progress."

New York City Pupils Earn $747,687 During School Year

The Bureau of Placements of the New York City department of education has recently reported that three thousand boys and girls of the elementary and high schools placed in positions by the bureau have earned three quarters of a million dollars during the last school year. The bureau placed 3,067 in positions since last September. Of this number, 700 boys and girls of continuation, trade, high, and elementary schools were placed permanently and are earning salaries ranging from $10 to $25 a week. They contribute $420,000 of the total earnings of $747,698 for the entire year.

The bureau also reports that cooperative students, who work one week and study the next, are earning $151.439 annually. There are 711 students in five city high schools under the cooperative plan who work in pairs on jobs obtained through the placement bureau.

R. H. Macy & Company employs the largest number of part-time workers on Saturdays and during the summer. There are 386 boys and girls who work thirty Saturdays during the year, each earning $2.50, while 400 work seven Saturdays prior to Christmas, and receive $2.50 also. Besides these two groups, 250 boys and girls were taken on for relief work during the summer and they earned $32,500 last year.

—Mr. Walter G. Jameson has announced that he has purchased the architectural offices and business of Mr. Warren W. Day and that he has formed a partnership with Mr. Elbert I. Harrison for the practice of architecture. The firm is located in the Peoria Life building Peoria, Ill.

—Mr. C. V. R. Bogert has anounced the removal of his offices to the People's Trust and Guaranty Company Building, 210 Main Street, Hackensack, N. J.

IMPORTANT SCHOOL-BOND SALES OF THE PAST MONTH

Alabama—Birmingham, Public School Building, C. B. Glenn, Supt.	$1,495,000
Arkansas—Ft. Smith, Sch. Dist., J. W. Ramsay, Supt.	550,000
California—Alameda Co., Oakland High Sch. Dist., David E. Martin, Supt., Oakland, Calif.	500,000
California—Los Angeles Co., Beverly Hills Sch. Dist., Mark Keppel, Supt., Los Angeles, Calif.	280,000
California—San Francisco Co., School, J. M. Gwinn, Supt., San Francisco, Calif.	1,000,000
Maryland—Montgomery Co., School, Series A-M, E. W. Broome, Supt., Rockville, Md.	450,000
Massachusetts—Malden, School, F. G. Marshall, Supt.	400,000
Michigan—Grosse Pointe Tp., Agricultural Sch. Dist. No. 4	400,000
New Jersey—Camden, School, James E. Bryan, Supt.	561,000
New Jersey—Fort Lee, Sch. Dist., Arthur E. Chase, Supt.	672,000
New Jersey—Princeton, Sch. Dist., M. T. Vanderbilt, Supt.	750,000
New Jersey—Verona, Sch. Dist., F. N. Brown, Supt.	523,000
New Jersey—Westfield, Sch. Dist., C. A. Philhower, Supt.	250,000
New Jersey—West Orange, Sch. Dist., Series B, S. C. Strong, Supt.	482,000
New York—Eastchester, Union Sch. Dist. No. 1	395,000
New York—Newburgh, High School	925,000
North Carolina—Durham, Public Sch. Dist., Frank M. Martin, Supt.	500,000
Ohio—Toledo, Sch. Dist., Chas. S. Meek, Supt.	1,250,000
Ohio—Wyoming, School, J. D. Stover, Supt.	400,000
Rhode Island—East Greenwich, School, I. C. Phillips, Supt.	250,000
Tennessee—Nashville, School Bldg. and Improvement Notes, H. C. Weber, Supt.	800,000
Texas—Brownsville, Ind. Sch. Dist., Thos. J. Yoe, Supt.	350,000
Texas—Goose Creek, Ind. Sch. Dist., J. C. Ingram, Supt.	450,000
Texas—Wichita Falls, Ind. Sch. Dist., Dr. J. U. Cantwell, Supt.	250,000
West Virginia—Parkersburg, Sch. Dist., H. E. Odgers, Supt.	250,000

The Education of Retarded Children in Massachusetts

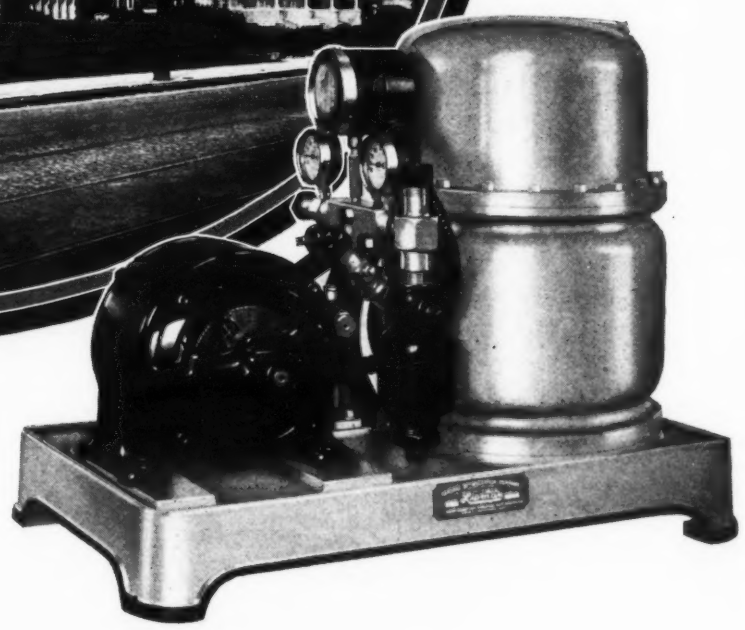
Under the rules of the state education department of Massachusetts, each local community must report the number of pupils three years or more retarded. Where more than ten such pupils are listed, an examination is made by the state department and the department of mental hygiene. Where the clinic recommends special instruction it becomes the duty of the school authorities to organize a special class.

The special class is designed for pupils who for one reason or another have become seriously retarded in their schoolwork. It may be continued for a year or two, or it may be operated for a period of years depending upon the number of pupils each year in the system. No pupil is placed in the special class unless recommended by the departments mentioned. Pupils are taken out of the class and placed in the regular grades whenever it is found that they can do satisfactory work in the grade they are to enter.

Lipman

AUTOMATIC REFRIGERATION





Lipman Refrigeration— Ideal For Schools!

Completely automatic (thermostat regulated), seldom needing adjustments, exceedingly economical (about one-fourth the cost of ice), Lipman Refrigeration is ideal for schools.

ELECTRIC REFRIGERATION

In the splendid Beaumont High School, St. Louis, Mo., two Lipman Machines are connected to the two 90-gallon ice cream cabinets in the cafeteria. They are protecting the health of the students, and at the same time, they are making money for the school, because they operate at less than half the cost of ice. Use the coupon below for full information.

Here is the Model 75 Lipman, two of which are installed in the Beaumont school. Note its compactness and sturdy construction. Lipmans are quiet, clean, and safe, and may be depended upon to give satisfactory service for many years.

GENERAL REFRIGERATION COMPANY

138-194 Shirland Ave., Beloit, Wis., U.S.A.

Please send me full particulars including Free Descriptive literature on Lipman Refrigerating Machines.

Name..... St.....

City..... State.....

THE DRY, CONSTANT COLD OF THE MOUNTAIN TOP

GR CO



CYCLONE FENCE COMPANY

The Mark of Dependable Property Protection

The siren shrieks, the fire truck thunders by. Danger threatens — but even greater danger lies in the path of regular traffic. Speeding cars, reckless drivers, often approach without warning. A child dashes out of the unfenced school ground—an accident happens!

But school boards have the power to prevent these traffic accidents—to make schoolgrounds safe. Hundreds of school boards have set the example by enclosing the schools under their jurisdiction with Cyclone Fence.

Cyclone Chain Link Fence is the recognized standard for enclosing school grounds. The Cyclone Fence Company will erect fence complete on your property.

Write nearest offices for full information, including list of schools that have installed Cyclone Fence.

CYCLONE FENCE COMPANY
Main Offices, Waukegan, Ill.

WORKS AND OFFICES:
North Chicago, Ill., Cleveland, Ohio, Newark, N. J., Fort Worth, Texas.

Pacific Coast Distributors:
Standard Fence Co., Oakland, Calif.
Northwest Fence & Wire Works, Portland, Ore.

Direct Factory Branches in All Principal Cities

WE ERECT FENCE ANYWHERE



For Athletic Fields
Cyclone Invincible Fence; Chain Link fabric, tubular steel posts and framework.



For School Grounds
Cyclone Wrought Iron Fence; built in handsome standard designs, also in special designs from architects' drawings.

Cyclone Fence
Reg. U. S. Pat. Off.

THE ONLY CHAIN LINK FENCE MADE ENTIRELY OF COPPER-BEARING MATERIALS — FOR MAXIMUM ENDURANCE

© C. F. Co. 1927



— doing faster, better work!

WAITING for an accident before doing away with dangerous stepladders in a school is like waiting for a fire before taking out insurance! The

DAYTON Safety Ladder

is rapidly becoming the only ladder of schools everywhere. Standing on its wide platform, protected by high guard rails, janitor, teacher, pupil —anyone—works as rapidly and safely as on solid ground.

Ample room on this platform, too, for tools, pails, and all equipment—no time lost in running up and down.

Made of steel-braced aeroplane spruce, with wide leg spread and safety lock, the Dayton cannot tip, slide, wobble, or collapse. Folds compactly; soon pays for itself in faster, better work; prevents costly accidents.

The Dayton is made in all sizes from 3 to 16 feet —and its cost is moderate!

Write Dept. A.S.B. 9 for complete information.

THE DAYTON SAFETY LADDER CO.
121-123 West Third St. Cincinnati, Ohio



Clarin Chairs are made of steel (excepting seat and rubber floor contacts) and will not mar the finest floor nor damage the most delicate floor covering.

CLARIN FOLDING CHAIRS

A QUALITY PRODUCT

The steel is of a special formula which accomplishes elasticity, durability, and long life.

The dimensions and their relation to each other, as well as design, have been approved by students of hygiene for comfort and correct posture.

The finish is of lacquer especially prepared for the use intended over an undercoat of rust-resisting elastic material with wonderful adhesive properties.

A quality purchase is truly ECONOMICAL.

Permit the CLARIN to demonstrate its quality by using the coupon.

Clarin Mfg. Co., 2456 N. Crawford Ave., Chicago, Ill.

Please send by parcel-post prepaid — sample CLARIN CHAIR, finish and seat as checked:

☐ Brown (walnut) ☐ Battleship Gray ☐ Wood Seat
☐ Maroon (mahogany) ☐ Olive Green ☐ Leatherette Seat

We will either return it or pay for it after ten days' trial.

Signed .....

BOOK REVIEWS

Nature Trails

By Dietrich Lange. Cloth, 261 pages. Published by D. Appleton & Company, New York City.

A series of sketches, describing wild life as it has been found within the limits of the United States by a lover and observer of wild things; common weeds and plants, fishes and other aquatic life, angleworms and other underground animals, birds and beasts of prey, flowers and forest trees—these and hundreds of other things.

The writer is a keen observer who sees beauty and wonder in all things, and who can write charmingly and interestingly concerning his finds and his explorations. He knows, too, what is of value to children engaged in nature study and he brings out quite unobtrusively valuable facts and principles which will aid later in the serious study of biology, agriculture and botany.

Basic Material for a Pharmaceutical Curriculum

Prepared under the direction of W. W. Charters, A. B. Lemon, L. M. Monell. Cloth, 366 pages. McGraw-Hill Book Co., New York, N. Y.

The present book outlines the objectives, method, and content for the curriculum of colleges of pharmacy and is the result of a study carried on by a staff of five men, aided by nearly one hundred specialists representing the American Association of Colleges of Pharmacy, the National Association of Druggists, and the National Association of Boards of Pharmacy. The outline covers in detail pharmacy, materia medica, chemistry, commercial pharmacy, and provides technics for curriculum construction, lists of ingredients used in prescriptions, standard equipment, inventories, and other related information. The entire material bears evidence of extended study and most painstaking care, and because of the cooperative nature of the entire undertaking will undoubtedly find wide use as the accepted guide for the American colleges and schools of pharmacy.

The layman who examines the outlines and who has had contacts with the pharmacist cannot help but wonder whether the ethics of the profession, or perhaps the personal moral standards of the druggist are sufficiently emphasized and properly motivated, in the outline. It is true professional morale and personal traits are discussed but it would seem that far more than the observance of laws and attachment to a professional or social ideal are needed to keep the pharmacist entirely at peace with his own conscience, and clear in his relations with a type of patrons who ask for more than the proper service.

The Foundations of Nutrition

By Mary Swartz Rose. Cloth, 501 pages, illustrated. Price, $2.75. Published by The Macmillan Company, New York City.

This college text presents a logical, formal treatment of the subject of nutrition, food and diet for persons who are likely to have need for considerable information in the course of professional work. The approach is from the medical, chemical, and dietetical standpoints. The work is amply illustrated and equipped with a vast amount of tabular data.

Thinking, Speaking, and Writing

By Mabel Holman, Donald Lemen Clark, and Benjamin Veit. Cloth, 325 pages. Published by Silver, Burdett & Company, New York City.

Seventh-year English is here outlined in a well-arranged text, the title of which describes the content, the attention given to clear thinking as a preliminary to expression, and the emphasis placed upon correct oral communication as more important than written communication. The work is arranged in forty chapters, each outlining lessons for approximately a week and presenting a closely related group of topics in expression, grammar, spelling, use of the dictionary, correct and incorrect usage, etc. The method is inductive and requires that the student think through problems. Most of the lessons are adapted to socialized recitations. Basic principles and troublesome usages are repeated spirally. Child interests and matters of common experience are used for exercises, story telling, and reviews.

An interesting chapter is devoted to the writing of poetry as a creative form of expression possible in children of twelve. Examples are given from books of verse by children. One cannot help but wonder whether suggestions to read such juvenile efforts are wise, whether references to carefully chosen examples from recognized poets would not be more truly inspirational, and whether some other motivation than simply creativeness or originality would not be more effective?

Story-Adventures

Fourth book of the Individual Progress Reading Series. By A. L. Subric and Myrtle G. Gee. Cloth, 319 pages. World Book Co., Yonkers, N. Y.

A silent reader for the lower grades. Animal stories, music, fables, adventures of children form the subject matter. In many respects the book is a greater development of the silent-reading idea than any previous book. The vocabulary is extensive and carefully adapted to the abilities of children.

The One Thousand Commonest Words Written in Shorthand

New era edition. Paper, 30 pages. Price, 25 cents. Issued by Isaac Pitman & Sons, New York, N. Y.

This booklet is a reproduction of Ayres' list of one thousand common words. The booklet is arranged in two sections. In the first section the words have been arranged in groups graded according to the introduction of the principles of Pitmanic shorthand so that the teacher and student may use this valuable list from the beginning of the course. In the second section, the words are arranged alphabetically, with numbers to indicate the chapter containing the explanation of the rules.

The booklet will be a valuable aid in gaining facility in writing in shorthand, as well as a means of learning the words through the medium of shorthand.

The Book of Games for Home, School, and Playground

By William B. Forbush and Harry R. Allen. Cloth, 315 pages. Price, $2. Published by John C. Winston Co., Chicago and Philadelphia.

This book is varied in scope, rich in the material it has to offer, and interesting in the character and use of the games outlined. It comprises four hundred games—active games, singing games, quiet games, stunts and games, amusements for convalescent children, and some pertinent suggestions for teachers in the teaching of games intelligently and successfully. Among the well-known old-time games listed are Blind Man's Buff; Drop the Handkerchief; Follow the Leader; Jacob and Rachel; Puss in the Corner; London Bridge; Button, Button; Simon Says; and Hunt the Thimble.

All in all, the book offers a list of surprisingly varied games. Most of the games are old ones that

Need More Rooms in a Hurry?

Here's the solution and a practical one.

Order one of "The Liberty" two-room Ambler Asbestos School Buildings like illustration below.

Panelled, roofed, sheathed with **fireproof** Ambler Asbestos building material of the most permanent and substantial type. The upkeep is negligible, as the main areas of these unique buildings have absolutely no need for paint.

Shipped in standard, easily-handled sections that can be speedily erected, yet the buildings have the appearance of structures costing several times as much. Can be salvaged later at a large part of original cost.

"The Liberty" Fireproof Asbestos Schools are approved by the State Department of Public Instruction of Pennsylvania and New Jersey as PERMANENT SCHOOL BUILDINGS.

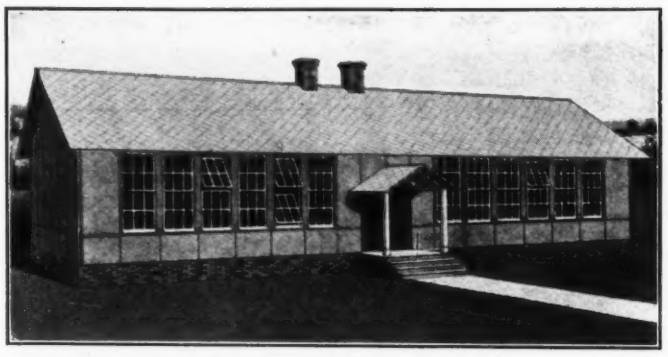
We'd be delighted to furnish an estimate covering your needs and tell you of the many school boards we are serving.

"Liberty" Schools are supplied in various sizes, ranging from one room, up to Consolidated Schools of ten or more rooms.

ASBESTOS BUILDINGS COMPANY

1013 Liberty Trust Bldg.
Philadelphia, Pa.

228 Pennant Avenue
Pittsburgh, Pa.



Factory — Ambler, Penna.

parents used to play and that they like to have their children learn. It also includes the best of the new games. The material is well graded and is arranged for easy reference. A closely graded list of games for school use will be found in a special appendix. The last section of the book contains a complete index to the material listed.

Half Hours with Popular Authors

Volume one. By A. Jeffrey Munro. Paper, 64 pages. Price, 30 cents. Issued by Isaac Pitman & Sons, New York, N. Y.

This booklet represents a number of brief extracts from well-known authors printed in the form of shorthand. The extracts are from Ruskin, Dickens, Scott, Brown, Longfellow, and Carlyle. The writing of these exercises will prove helpful in gaining facility in writing the outlines of words, at the same time giving the student an insight into these gems of literature.

Teacher's Manual for Picture-Story Reading Lessons

By Nila B. Smith and S. A. Courtis. Paper, 24 pages. Price, $1. World Book Co., Yonkers, N. Y.

This book is a teacher's manual for use in teaching by means of the picture-story reading method. In the lessons, a special effort has been made to arouse the children's own desire to engage in the various activities by making appeals to instructive interests in making colored pictures, in dramatizing, and in accumulating new lessons. The self-help features in the picture-story reading lessons, together with many activities in which the pupils engage in carrying out the lesson, make it possible for children to learn from their own experience.

The teacher is encouraged in the application of this principle by actually setting free those pupils who are capable of self-directive work and by encouraging the less capable ones by giving them opportunity to learn from their own efforts.

The manual provides definite and detailed directions which the teacher will have no difficulty in following and it provides the necessary helps and materials so that much of the drudgery of the work is eliminated. Every possible aid for seat work, phonic material, and silent-reading exercises are provided for the teacher's use.

Healthful Living

By J. F. Williams, M.D. Cloth, octavo, 596 pages. The Macmillan Co., New York.

This is a revised edition of a work which has been popular since its first appearance in 1919. It hardly seems possible that the short period of eight years can bring forth so many new facts and principles based on experimentation, field experience, and discovery that a thorough rewriting of more than a third of a book and the careful revision and restatement of practically the entire text are necessary. The book gives evidence, too, of the many contributing sciences and of the growing fields of human effort which affect health and which contribute to a book like the present. In one or two spots the author's eagerness for introducing the latest facts has perhaps caused him to introduce matters which will prove of momentary value only.

Everyday Foods

By Jessie W. Harris and Elizabeth V. Lacey. Fabrikoid, 512 pages. Price, $1.56. Houghton Mifflin Co., Boston, Mass.

The authors of this book have thrown precedents, in the matter of contact and arrangement of texts for cooking classes, to the winds and have tried to produce a work that involves all the major elements which the housewife takes into account when she feeds her family. First, they have accepted the commonplace fact that folks eat three meals a day—breakfast, lunch, or supper, and dinner—and that as a people, certain good habits and customs have been developed in the general arrangement and menus for these three meals. They proceed accordingly to discuss the planning of these three meals, the reasons for and the methods of selecting the chief varieties of foods, the methods of cooking or other preparation of these foods, the health values—and disadvantages—of the foods, and finally their serving.

But the housewife has more to do than select, prepare, and serve meals. She must know more than merely how and what to cook. She must understand and consider the daily food requirements of growing children, of adults (according to age, health, and occupation). Her skill in marketing may be the means of important economies for the family. She can save her strength and make her work pleasant if she has a conveniently arranged, well-equipped, and attractively decorated kitchen. She must understand the selection of china and silver and other equipment for the dining room; the social amenities of table etiquette and good usage in table service must be second nature to her. All these matters the book takes up in natural, logical order.

Finally, the book presents such important phases of the cooking problem as the feeding of the sick and of children, the canning of fruits and vegetables, the making of jellies and other preserves, food frills like candies and cakes and garnishes, and cooking for "occasions."

Paralleling the formal study of the subject, as outlined above, "the cookbook" proper concludes the book and outlines the specific laboratory work which may be done to make the facts and principles a reality through experience.

The authors have tried successfully to put the work on a par with other subjects in the high-school curriculum by bringing all the related elements up to a definitely scientific basis and by insisting on accurate information and study. The topics are presented in a simple, straightforward manner that somehow seems to carry interest and inspiration, and the cookbook is amply practical for the most hardheaded experienced home cook. In everything the book is a blending of common sense with latest scientific facts and findings to meet any junior- or high-school needs.

Mechanical Pictorial Drawing

By W. W. Sturtevant. Cloth, 128 pages. Price, $1.28. The Bruce Publishing Co., Milwaukee, Wis.

This book outlines the principles of cabinet drawing, isometric drawing, and perspective drawing, and illustrates each principle with suitable problems and plates. The work is carefully graded for use in high schools and night classes.

List of Inspected Fire Protection Appliances. July, 1927. Published by the Underwriters' Laboratories of the National Board of Fire Underwriters, 207 East Ohio Street, Chicago, Ill. This list and a list of inspected gas, oil, and miscellaneous appliances have been published as a part of the inspection service maintained by the National Board of Fire Underwriters. In the list are designated appliances and materials which have been investigated as to the fire hazard, and those which have been investigated as to both fire and accident hazard. The service also includes examinations and tests of products at factories by laboratories' engineers and the correction by the manufacturer of features found not in compliance with the standards established. Certain products of classes which are not included in the system of inspection are listed under trade names, catalog numbers, or otherwise.

Investigate Your Cleaning Costs



Do you weigh school maintenance costs against returns?

Undoubtedly — in many cases. Your coal bills, for instance, represent definite heat production per dollar expended. But do you buy cleanliness, germ-free air, and dustless rooms on the same sane and sure basis?

You do not buy twice the amount of coal you need and then throw away the unneeded half. Are you paying twice as much as you should for efficient cleaning?

School cleaning is a daily charge. You cannot forego or ignore it. Of its necessity—whatever the cost—there can be no argument. But do you buy it on a rational basis?

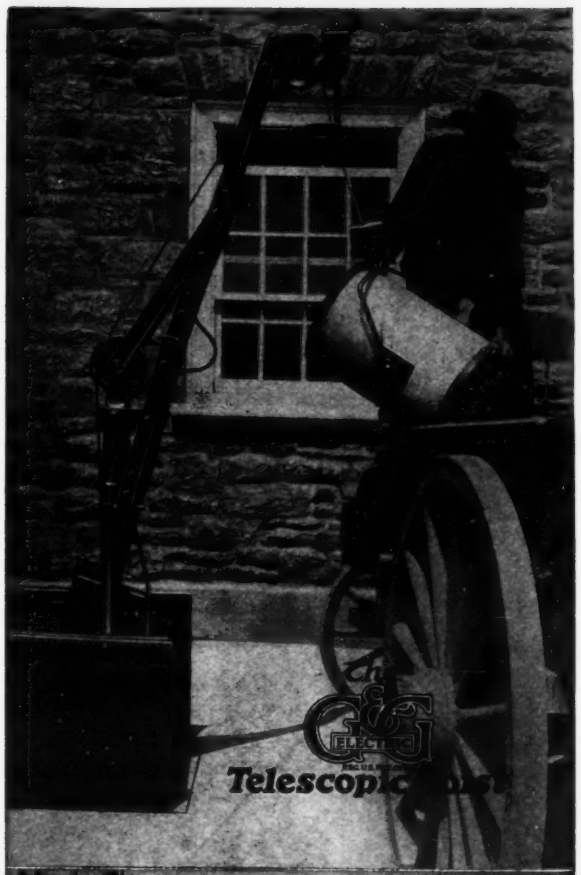
We have no competitive figures showing what other systems will return per dollar invested, but we have mighty interesting data on **Super Service Cleaners** and what they are doing.

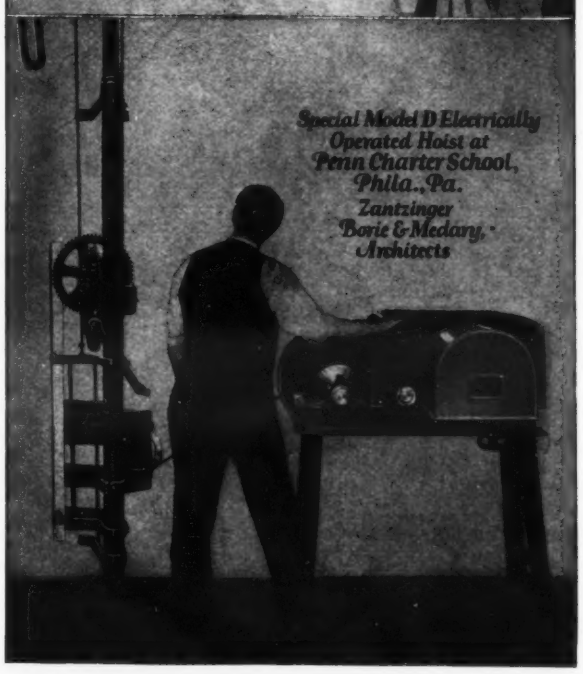
You will find their job does not stop with cleaning. They are time and money savers in other important respects.

Investigate — weigh cleaning costs and returns. Start by writing today for full information about **Super Service Cleaners.**

The Super Service Company

820 Lafayette Street Toledo, Ohio.





Why Schools Prefer G&G Ash Removal Equipment

1. ***Complete safety:*** Fully enclosed sidewalk opening. G&G Sidewalk Doors and Spring Guard Gates operate AUTOMATICALLY. No danger of accident. Pupils safeguarded.
2. ***Economical operation:*** One man does work of two. Two men do work of four or more. Electric models consume very little current.
3. ***Speedy performance:*** Cans raised at speed of 30 to 60 feet a minute, depending on model. Quiet, efficient operation.
4. ***Long life:*** Extra strong construction of all parts assures long "trouble free" life.
5. ***Range of models:*** A Hoist to meet every need, in numerous hand-power and electric models.

Your Architect has our Catalog on file

GILLIS & GEOGHEGAN

551 WEST BROADWAY NEW YORK



Make Your Fire Drills *EASY!*

Wherever Logan Spiral Slides are used, fire drills are eagerly anticipated by the children.

Their confidence in the Logan is your best assurance of safe, orderly exit when fire actually strikes.

Write today for full information on the Logan Spiral Slide—the fastest, safest, surest firescape ever invented.

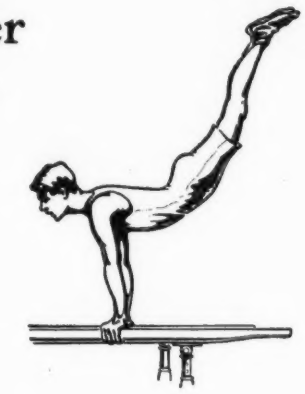
Logan Firescapes



LOGAN CO., *Incorporated*
(Formerly The Dow Co.)
300 North Buchanan Street
LOUISVILLE, KENTUCKY

NARRAGANSETT
Standard Equipment
GYMNASIUM-PLAYGROUND-STEEL LOCKERS

Are You Master of Your Body



The ideal of those in charge of education is the full development of every student in Body, Mind, and Soul. The glow of health that comes from physical well-being depends on consistent all-round body development. Your gymnasium properly equipped with Narragansett Standard Apparatus offers facilities for ideal Physical Education.

NARRAGANSETT MACHINE CO.

CHICAGO PROVIDENCE, R. I. NEW YORK
1504 Monadnock Block *Established 1882* 138 E. 44th Street

LEGISLATION FOR CHILD LABOR AND SCHOOL ATTENDANCE

The Children's Bureau of the U. S. Department of Labor, in a tentative report dealing with labor and compulsory attendance, states that North Carolina has amended its law prohibiting night work for children under 16 years by making the prohibited period begin at 7 P. M. (formerly 9 P. M.). The law also provides a maximum 8-hour day and a 48-hour week for the employment of children 14 to 16 years of age who have not completed the fourth grade.

Connecticut has made provision for a part-time certificate permitting the employment of children outside of school hours. In Maine, the educational requirement for children under 16 years of age leaving school for work was raised from completion of the sixth to completion of the eighth grade, and a proviso was added permitting the issuance of special permits to children unable to reach this standard because of subnormal mental capacity.

An attempt to cope with the problem of schooling of migratory child workers by legislative methods has been made by the introduction in New Jersey and Pennsylvania legislatures of bills making it unlawful for nonresident children to be employed during the time when the laws of the state of the child's residence require his attendance in school. The bills were proposed as a result of conferences between the school and labor authorities of the two states and certain welfare interests. Neither bill became a law. The New Jersey bill was held up in one house without coming to a vote and the Pennsylvania bill was passed but was vetoed by the governor. A number of other states failed to pass migratory child labor measures.

A backward step has been taken in Minnesota where a law providing that permits of employment in theatrical exhibitions may be issued to children under 10 years of age was amended to allow the industrial commission to use discretion in permitting such employment for children under 10.

INSTRUCTIONAL COSTS PER PUPIL IN NEW JERSEY

The instructional costs per pupil in average daily attendance in New Jersey have been computed from expenditures reported by the county superintendents for the school year ending June 30, 1926, and include the salaries of supervising principals, principals who do no teaching, supervisors, including supervisors of physical education, salaries of clerks who do no teaching, traveling and other personal expenses in the performance of their duties and office supplies, supervision, textbooks, supplies, other instructional expenses, and total instruction for all districts, cities, urban, and rural districts, and counties, together with state averages for the school years 1924-25 and 1925-26.

The median costs per pupil in average daily attendance in all districts for the year 1925-26 were: Supervision, $6.37; teachers' salaries, $50.86; textbooks, $2; supplies, $2.53; other instructional expenses, $0.19; total instruction, $58.62.

The median costs for city districts for 1925-26 were: Supervision, $8.17; teachers' salaries, $69.13; textbooks, $1.95; supplies, $2.98; other instructional expenses, $0.23; total instruction, $81.85.

The median costs for rural districts were: Supervision, $5; teachers' salaries, $46.28; textbooks, $1.79; supplies, $2.18; other instructional expenses, $0.19; total instruction, $51.

For the state as a whole in 1925-26 seven dollars and twenty-eight cents were expended per pupil in average daily attendance for supervision. This was $0.43 more per pupil than in the previous year. The cost of teachers' salaries was $66.39 per pupil, which was an increase of $2.63 over 1924-25. Textbooks showed a decrease of $0.19 and supplies had an increase of $0.05 per pupil, while other instructional expenses increased $0.14 per pupil during the year. The total cost of instruction per pupil in 1925-26 was $78.55, which was an increase of $3.08 per pupil over that of 1924-25. Out of every dollar expended for instructional purposes in day schools in 1925-26, nine and three-tenths cents were spent for supervision; eighty-eight and three-tenths cents for teachers' salaries; two and four-tenths cents for textbooks; three and six-tenths for supplies, and three-tenths cents for other instructional expenses.

In 1925-26 the median costs of supervision, teachers' salaries, textbooks, and other instructional expenses in all the school districts of the state were higher than in 1924-25 per pupil in average daily attendance, with the exception of supplies, which remained the same as in 1924-25. The median school district in 1925-26 expended $6.37 per pupil for supervision, $50.86 per pupil for teachers' salaries, $2 per pupil for textbooks, $2.53 per pupil for supplies, $0.19 for other expenses, and $58.62 per pupil for total cost of instruction.

Cities spend more per pupil in average daily attendance for supervision, teachers' salaries, supplies and other expenses than do urban or rural districts. Urban school districts expended more per pupil for textbooks than the city or rural districts. Urban districts spent less per pupil for teachers' salaries, textbooks, supplies, and total instruction than was expended in 1924-25 per pupil in average daily attendance.

The total cost of instruction increased $2,883,993 over that of 1924-25, or an increase of 6.7 per cent, while the average daily attendance increased by 12,837, or 2.2 per cent.

TEN FUNDAMENTALS OF UNIT VENTILATION AND THEIR APPLICATION

(Concluded from Page 74)

Conclusion

In conclusion there are several important requirements to be met in the designing of a unit system which are sometimes overlooked.

First: To obtain the best results, the unit should be placed along the outside wall and in the center of the wall.

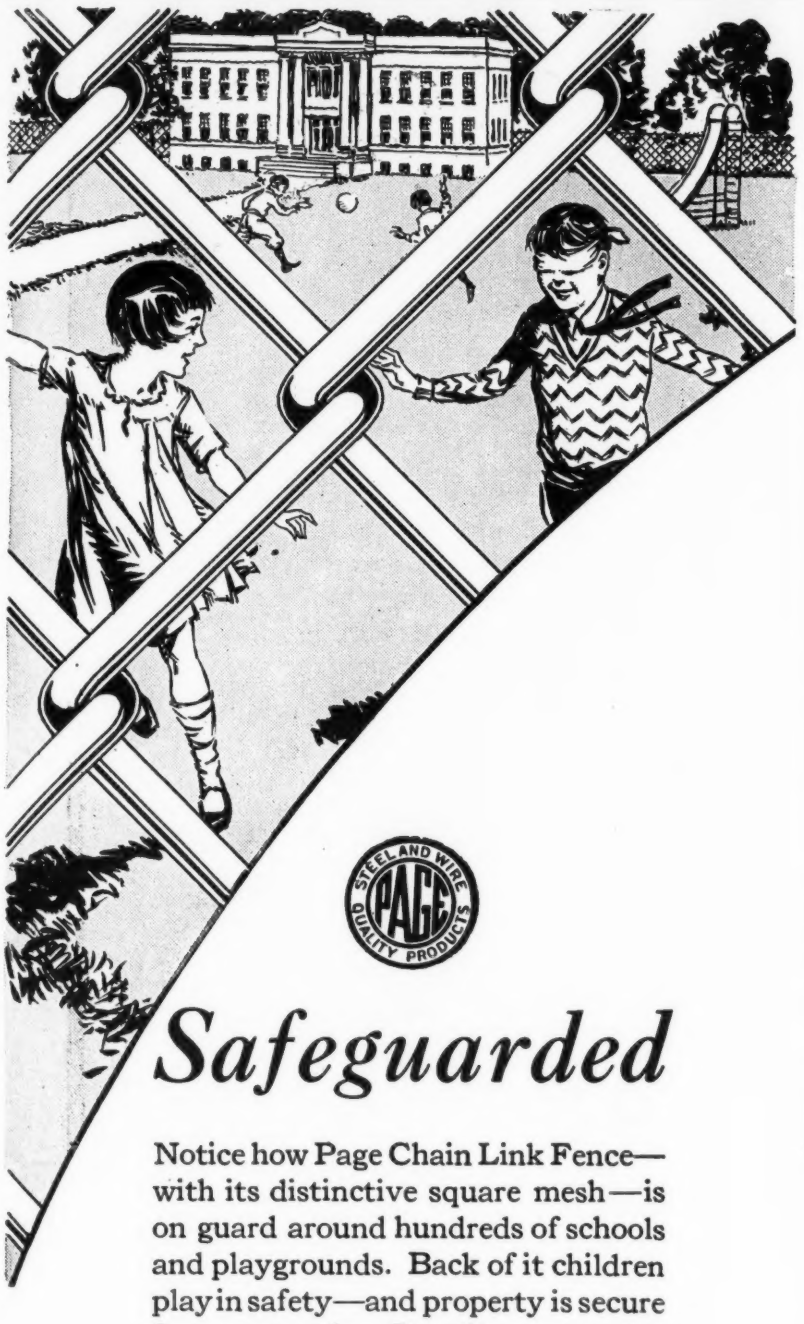
Second: Care should be used in locating the vent flue or vent outlet so that it is on a direct line opposite the venilating unit.

Third: Vent flue areas should be restricted, where the law permits, to 20 sq. in. cross section of flue area per 100 cu. ft. of air.

Fourth: Where thermostatic control is used it is important that the thermostat be located as nearly as possible on a direct line opposite the ventilating unit.

Fifth: Where conditions permit, use the blast system, and in no case provide sufficient radiation to heat the room independent of the ventilating unit.

—Somerset, Mass., has been active in the school-building line during the past summer. An addition has been built for the Pottersville School at a cost of $28,000; a four-room school building has been erected at South Somerset at a cost of $45 000, and a municipal building with two rooms for the school department has been erected at a cost of $45,000. A site has been purchased for a junior-senior high school.



STEEL AND WIRE PAGE QUALITY PRODUCTS

Safeguarded

Notice how Page Chain Link Fence—with its distinctive square mesh—is on guard around hundreds of schools and playgrounds. Back of it children play in safety—and property is secure from trespassing. Sturdily constructed of copper-bearing steel, heavily galvanized after weaving. All fittings, too, zinc coated to resist rust.

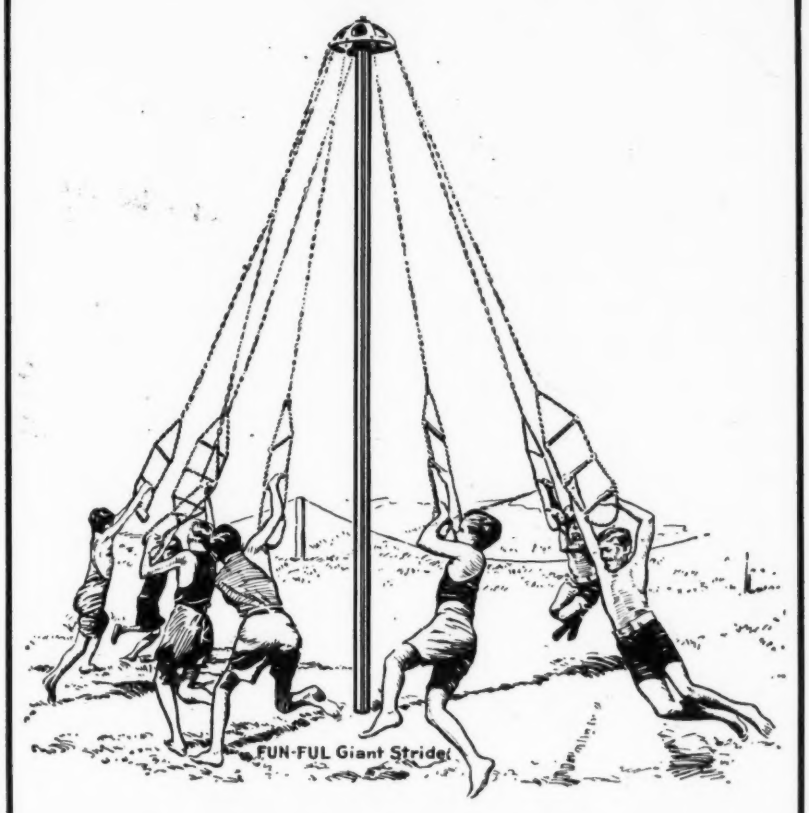
A National Service

There is a Page distributor in your immediate vicinity. He is experienced in school and playground protection—and will gladly submit plans and estimates. Write for literature and his name and address.

PAGE FENCE ASSOCIATION
215 North Michigan Avenue, Dept. J9
Chicago, Illinois
Offices in all principal cities

PAGE
CHAIN LINK
FENCE

America's first wire fence -since 1883



THE FUN-FUL LINE
PLAYGROUND EQUIPMENT

FUN-FUL Playground Equipment is the result of experience, a quarter of a century devoted to the development and manufacture of children's outdoor health building goods by this company.

The best you can buy, this we guarantee.

We offer the most comprehensive line to select from, nothing but approved and guaranteed apparatus.

Also manufacturers of

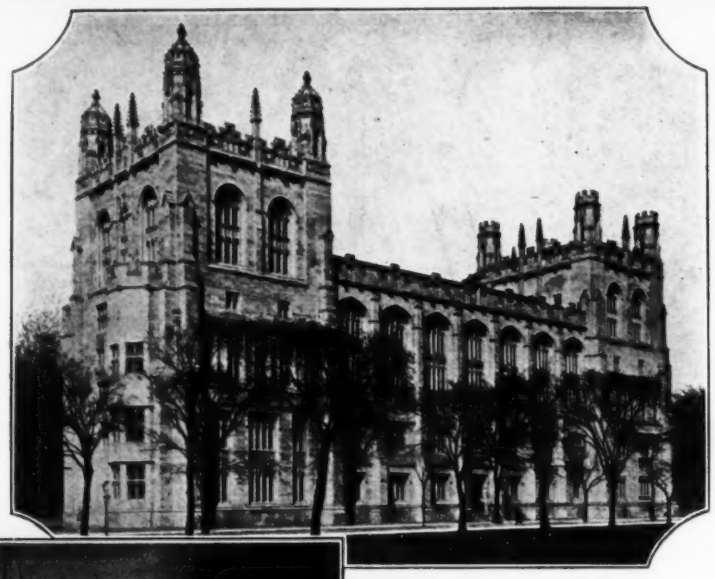
SWIMMING POOL
SPORTS APPARATUS

Water Slides	Aqua Planes
Marine Monsters	Pool Ladders
Balsa Wood Surf Boards	Diving Towers
Life Buoys	Water Ponies
Safety Pool Matting	Life Line Buoys
Landing Stairs	Depth Markers
Spring Boards	Life Lines, etc.

Largest manufacturers of playground and swimming pool equipment

Awarded Gold Medal Brazilian Centennial 1922-1923

HILL-STANDARD CO.
EST. 1900
Anderson, Indiana, U.S.A.







In the Commerce and Administration Reading Room of the Harper Memorial Library, University of Chicago, oak floors are in use.

Put your flooring problems up to our experts. We will gladly serve you.

Dignity and Permanence in Floors of OAK

OLIVER WENDELL HOLMES in his delightful poem, "The Deacon's Masterpiece, or The Wonderful 'One-Hoss Shay'" in the building of which only the strongest materials were used, including floors of oak, points this moral: "little of all we value here wakes on the morn of its hundredth year, without both feeling and looking queer. In fact, there's nothing that keeps its youth, so far as I know, but a tree and truth."

In college libraries and reading rooms, devoted to the study of truth, what more fitting than floors of oak—from the tree that endures for centuries, recognized for ages as the symbol of character and dignity!

Oak floors grow more mellow and beautiful with time; a little attention to the surface is all that is needed to keep them in perfect condition. They are sanitary, because the tight continuous surface repels dirt; and healthful, because wood diminishes the strain of constant standing and walking.

Valuable information on the uses, advantages, and proper care of oak floors will be mailed to school officials on request.

OAK FLOORING BUREAU
1267 Builders' Building
Chicago

OAK FLOORS

NATURE'S GIFT OF EVERLASTING BEAUTY



SENIOR AND JUNIOR HIGH SCHOOL, BALTIMORE, MD.
Owen and Sisco, *Architects*
J. Henry Miller, Inc., *Builders*
Duraflex-A in Class Rooms, Laboratories, etc.

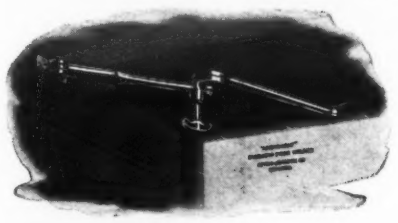
IN CITY AFTER CITY, Duraflex-A Flooring is being installed in many fine new buildings because it provides a permanent, seamless wearing surface that can be maintained against wear and damage and can be kept most economically in perfect condition for the life of the structure in which it is placed. Complete data upon request.

THE DURAFLEX COMPANY, Inc.
Main Office and Plant
BALTIMORE - MARYLAND
OFFICES IN ALL PRINCIPAL CITIES

DURAFLEX-A FLOORING

Bronze Door Holders for Schools

Standard Equipment in Over 100 Cities



Aristocrat Overhead Door Holder

For installation on Entrance Doors opening out.
"Up over the heads of the crowd."

Rawling's Automatic Door Holder and Bumper

For installation on classroom or corridor doors opening back to partitions or walls.
Can be installed on baseboard, chair rail or at top of door.



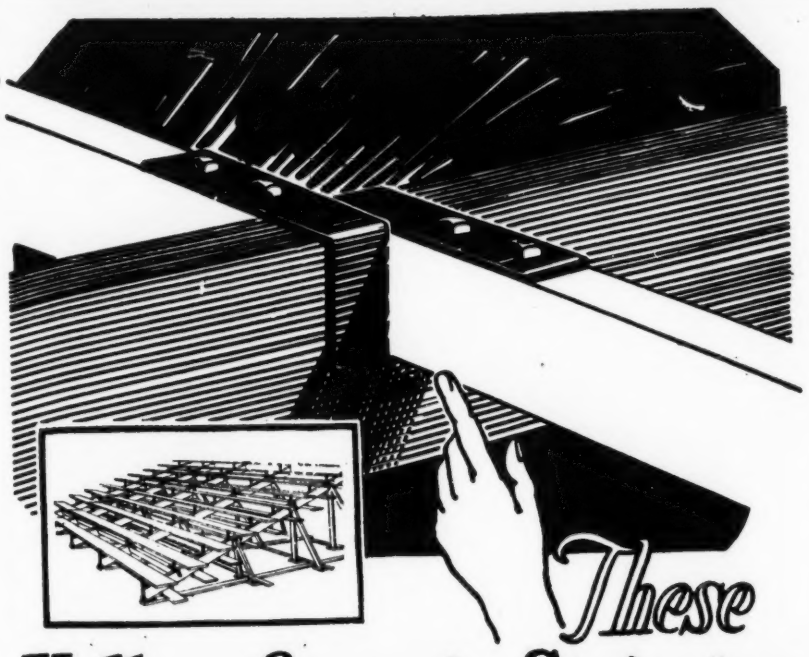


Hercules

Fulcrum or Leverage principle. Simple—Noiseless in operation. Splendid equipment on doors of every description. Especially Doors operating with door closers, or checks.

Write for descriptive literature

Glynn-Johnson Corporation
La Porte, Indiana



These Yellow-Orange Stringer Ties Insure Safety

In the terms of the Building Code, Knockdown Bleachers have a Safety Factor of four or more

When seething, swaying crowds pack every inch of available space on Knockdown Bleachers—there is no danger.

If by magic, these crowds could be doubled and tripled in the same space, your bleachers would still have an ample margin of protection.

You can thank the golden yellow stringer ties for this to a large degree.

They are patented. They prevent side sway and end thrust, and they are extremely simple.

A minutes study of the engineering plan as well as the combined evidence of hundreds of users will convince you of this.

May we send a booklet with full information.

There is no obligation in sending for this booklet, which contains full data and information on Knockdown Bleachers.



LEAVITT MFG. CO
Dept. S-8
Urbana, Illinois

Please send me without obligation a copy of the Knockdown Bleacher Book.

Name _____

Address _____





A Popular *Century* Drinking Fountain For Schools

To look at a Century Fountain is an invitation to take a drink. Children need plenty of water for healthy growth and they get it from the Century.

The patented bubbler head can be regulated to give any desired volume of water without waste and without squirting or splashing. The china mouth guard prevents the drinker's lips from touching the bubbler head.

The flat back fits snugly against the wall and the sanitary porcelain finish makes it easy to keep clean.

This is one of the many Century Fountains specially adapted to school installation.

Send for our complete catalogue. It fully illustrates and describes Century Fountains.

Century Brass Works, Inc.
319 N. Illinois St. Belleville, Ill.

Fool Proof



Patented

Vertical Bubbler Regular Angle Bubbler on order

Schoolyard service requires the unbreakable Murdock Outdoor Bubble Font.

Solid Bronze Bowl and Bubbler.

All brass supply pipe, valve and inner works. Nothing to corrode.

Heavy cast iron pedestal.

No cock to get out of order. The valve is pedal acting.

Self-draining. Every drink is fresh.

Children cannot squirt with it.

Anti-freezing.

All working parts are completely enclosed and out of harm's way yet readily accessible. No digging up.

Also Indoor Drinking Fixtures for Schools.

Write for handsome booklet "What To Know About Outdoor Drinking Fountains."

THE MURDOCK MFG. & SUPPLY CO.
Cincinnati, Ohio
Makers of Outdoor Water Devices since 1853

Bradley Washfountains



PROMOTE BOTH CLEANLINESS AND SANITATION | **REQUIRE BUT A MINIMUM OF JANITOR SERVICE**

"The First Cost is the Last Cost"

Bradley Washfountains represent a great advance in modern washroom equipment. They promote both cleanliness and sanitation, are self cleaning and require but a minimum of janitor service.

And Bradley Washfountains are most economical. Their use reduces the number of fixtures required. They save floor space, use less water, and permit the use of fresh tempered water at all times.

For use in Schools, Colleges and Universities and in every type of public lavatories, there is no fixture equal to the Bradley Washfountain in utility, durability and beauty and in economy of operation and maintenance.

Write for Catalog

Bradley Washfountain Co.
Milwaukee, Wisconsin

A FEW SCHOOL INSTALLATIONS

Crane Technical High School,
Tilden High School,
Schurz High School,
Austin High School,
Morgan Park School,
Chicago, Ill.
Garvey School,
Los Angeles, Calif.
Theodore Roosevelt Junior and Senior High School,
Amsterdam, N. Y.
Marquette University,
Continuation School,
Milwaukee, Wis.
Fortuna Grade School,
Fortuna, Calif.
Washington Ave. High School,
Canton, Ohio
High School,
Green Bay, Wis.
Fond du Lac High School,
Fond du Lac, Wis.
South Omaha High School,
South Omaha, Nebr.
Woodland Union High School,
Woodland, Calif.
Old Government School,
Oneida, Wis.
Great Neck Prep. School,
Great Neck, L. I.
High School,
St. Charles, Ill.
AND MANY MORE.



THE
NIEDECKEN SHOWER HEAD
PATENTED

A Niedecken Shower Equipment

Showers are frequently condemned because a proper flow of water cannot be obtained from the shower head on account of clogging of the spray holes in the face and the difficulty of removing it for cleaning. The face of the Niedecken Shower Head is easily removed for cleaning.

The Shower Head is sold separately only for replacement of heads on showers already installed.

Write for Bulletin S.B.15X

HOFFMANN & BILLINGS MFG. CO.
MANUFACTURERS SINCE 1855.
MILWAUKEE, U. S. A.

CONSTRUCTIVE

from SCHOOLS PUPILS EVERY PARENTS *Angle*

THE A.T. WALRAVEN BOOK COVER

Keeps books clean and neat for pupils and teachers, and saves money for the parents, either directly as purchasers or indirectly as tax-payers. Covered books are greatly strengthened and last much longer.

Walraven Service is nation-wide. Write either our Chicago or Dallas office for information.

A.T. Walraven Book Cover Co.

DALLAS – CHICAGO

"The Book Cover with the Double Corners"



Conservatory of Music, Northfield, Minn.
Sound-proofed with Cabot's Quilt.
Patton, Holmes & Flinn, Architects, Chicago.

Sound Proof Music Rooms

All school-rooms need sound-proof floors and partitions, but music rooms most of all. The above building was sound-proofed with

CABOT'S QUILT

and the directors report the usual "perfect results."

Sound-proof, Decay-proof, Vermin-proof and Fire-resistant — the only material that meets all requirements.

Samples and full details on request.

Samuel Cabot, Inc., Mfg. Chemists, Boston, Mass.
342 Madison Ave., N. Y., 24 W. Kinzie St., Chicago.



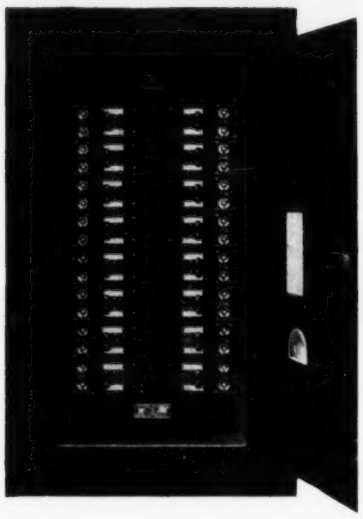
When you spend the money entrusted to your care, by your taxpayers, for Blackboards, you will be confronted by a bewildering array of claims in favor of a large variety of artificial Blackboards.

You do not want to purchase anything that needs "purchasing over" or that will pledge you to further expenditures. That is why you will want to equip your School with our

Natural Slate Blackboards

They require no upkeep, while artificial Boards must be resurfaced, repaired and replaced regularly. In comparison, the word "economy" is defined in its truest sense. It is finished with a beautiful, velvety smooth surface that does not become gray with age or use; that makes writing a pleasure and reading a relief to the eyes of the students and teachers. These are but a few of the advantages. Before you spend a dollar for Blackboards, you should read our book "How to Judge, Specify and Install Blackboards." Send for it today.

PENN'A STRUCTURAL SLATE CO., INC.
WORTH BLDG. EASTON, PA.



Panelboards are Safe for Schools

An absolutely safe, dead front panelboard with other important and exclusive features that make it the practical, economical, and dependable panelboard for all school buildings. A type for every need—a size for every school.

Send for the most complete panelboard book ever printed—the FA Catalog. Free.

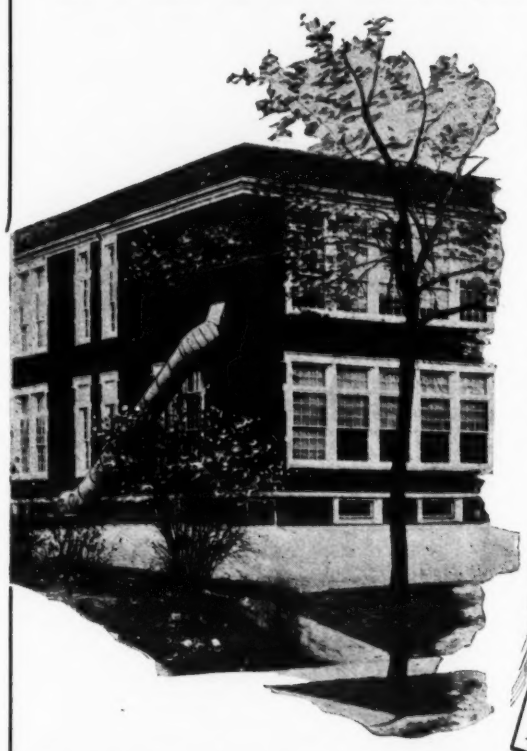
Frank Adam
ELECTRIC COMPANY
ST. LOUIS

DISTRICT OFFICES

Atlanta, Georgia
Baltimore Maryland
Boston, Massachusetts
Brooklyn, New York
Buffalo, New York
Charlotte, North Carolina
Chicago, Illinois
Cincinnati, Ohio
Dallas, Texas
Denver, Colorado
Detroit, Michigan
Kansas City, Missouri
Los Angeles, Calif.
Memphis, Tennessee
Miami, Florida
Minneapolis, Minnesota
New Orleans, Louisiana
Omaha, Nebraska
Philadelphia, Pennsylvania
Pittsburgh, Pennsylvania
San Francisco, California
Seattle, Washington
Vancouver, British Columbia
Walkerville, Ontario
Winnipeg, Manitoba

The most terrible CATASTROPHE

that ever happened in an American school occurred in a school where fire drills were carefully and regularly practiced.



FIRE DRILLS are essential—BUT when not practiced on regular fire escapes, are little protection from

FIRE PANIC which according to fire statistics, is ten times more dangerous.

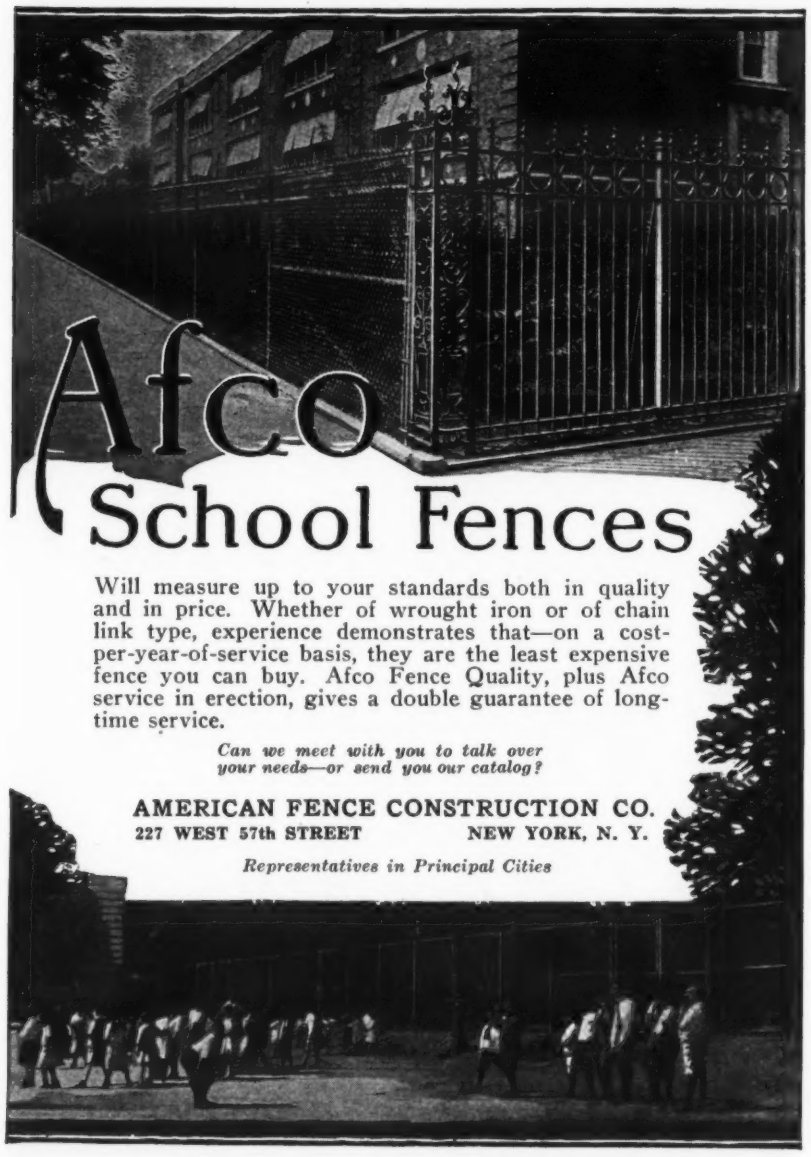
PANICS can be avoided.
Let us tell you how.



POTTER MANUFACTURING CORPORATION
1858 Conway Building CHICAGO

Manufacturers of the only Fire Escape approved by the Fire Underwriters' Laboratories.

This little book will give you some interesting formulas. It's yours for the asking.



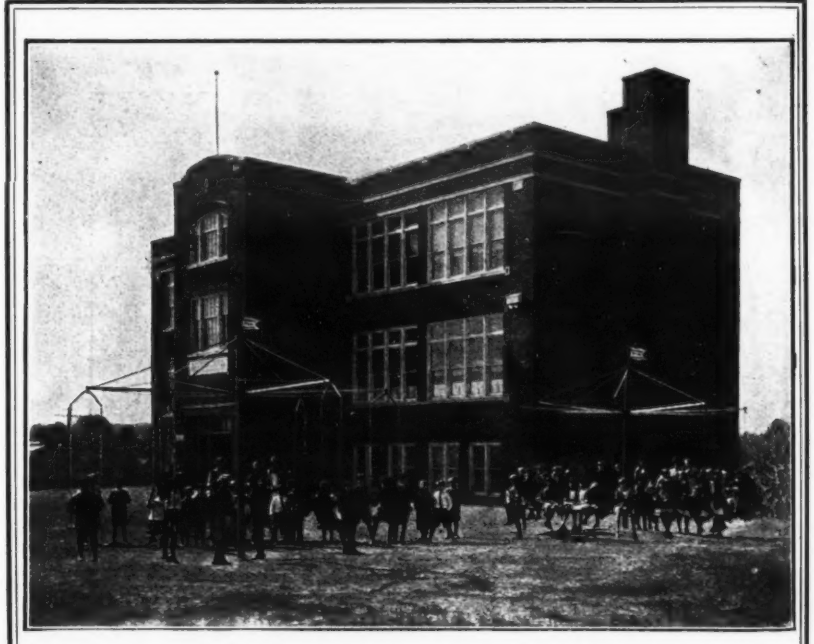
Afco School Fences

Will measure up to your standards both in quality and in price. Whether of wrought iron or of chain link type, experience demonstrates that—on a cost-per-year-of-service basis, they are the least expensive fence you can buy. Afco Fence Quality, plus Afco service in erection, gives a double guarantee of long-time service.

Can we meet with you to talk over your needs—or send you our catalog?

AMERICAN FENCE CONSTRUCTION CO.
227 WEST 57th STREET NEW YORK, N. Y.

Representatives in Principal Cities



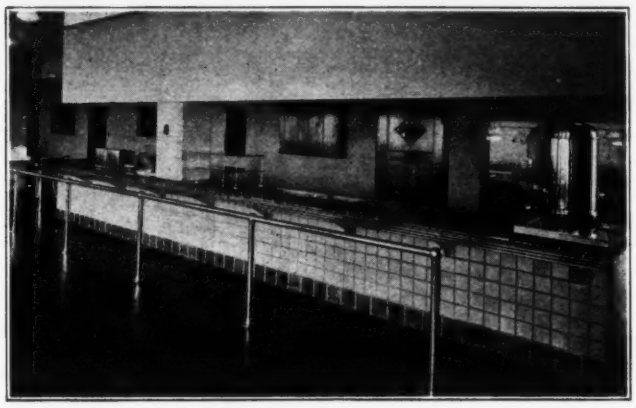
SOUTH VIEW SCHOOL — MILWAUKEE, WIS.

PLAYGROUND APPARATUS
featuring the
Mitchell "Merry Whirl"

The Mitchell Merry-Whirl will accommodate as many as fifty children at one time and it operates so easily on its roller and ball bearings that one little tot of five or six can manipulate it alone without excessive exertion. Its ample capacity and variety of motion—swinging in and out from the mast as well as around it—adapts it to places where limited space precludes the use of more than one Playground attraction. A plot 30 ft. square is room enough for the Mitchell Merry-Whirl.

Write for Catalogue

MITCHELL MANUFACTURING CO.
1801 Forest Home Avenue Milwaukee, Wis.
— BRANCHES —
ST. PAUL CLEVELAND WICHITA



Two Objectives Are Kept Constantly
In Mind by Our Engineering Department

1st. To design our school lunchroom and cafeteria equipment so that it will give maximum convenience in service.

2nd. To plan its arrangement so that the various units will give the greatest possible efficiency in handling.

May we assist you in your needs for either new buildings or replacements?

"We specialize in serving Schools"

The CLEVELAND RANGE Co.

General Offices and Factory, **3323 Vega Avenue**
Display Rooms, **519-21 Huron Rd.**
CLEVELAND, OHIO

EVERYTHING for THE DINING ROOM AND KITCHEN

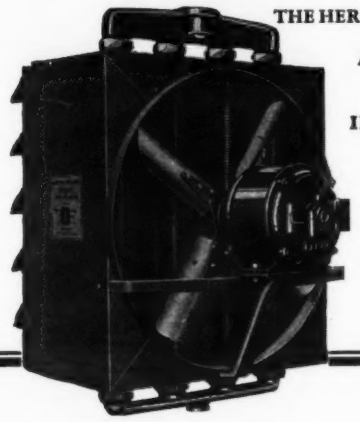
The
Herman Nelson hiJet
With
Unit The Trade Core RADIATOR Heater

realizes all the theoretical advantages of Unit Heater principles

Leak-proof, rust-proof and indestructible in service . . . Operating steam pressure from 1 to 150 lbs. No reducing valves necessary . . . Greater range of flexibility and capacity. Freezing cannot harm it . . . There are many other reasons, each distinct and exclusive, why the Herman Nelson hiJet Unit Heater realizes your ideal of a trouble-proof, efficient unit heater . . . Before you contract for any unit heaters, let us submit our facts for intelligent study . . . If you are interested in heating·

Factories • Mills • Railroad Shops • Roundhouses
Warehouses • Garages • Gymnasiums • Auditoriums

write for our catalogue



THE HERMAN NELSON CORPORATION
Moline, Illinois
***Makers of the* UNIVENT**
and the
HERMAN NELSON
INVISIBLE RADIATOR



Write for your copy of the Herman Nelson hiJet Unit Heater catalogue.

MODERN GYMNASIUM APPARTUS
VERY HIGHEST GRADE
ABSOLUTE GUARANTEE
ORDER NOW! !

SEND FOR ILLUSTRATED CATALOG



MANUFACTURERS

CHICAGO GYMNASIUM EQUIPMENT COMPANY

1835 W. LAKE ST. CHICAGO



Gridiron Days mean crowds and cash—*will you get yours?*

H-O-L-D T-H-A-T L-I-N-E! Football days will soon be here. Crowds will soon be clamoring for seats. Will you get your share of the fans—and the gate receipts?

Fans want seats, and are willing to pay for them. Bring them to *your* games with safe, comfortable, Circle A Bleachers.

Circle A Bleachers go up quickly. Three or four boys can erect seats for a hundred in about 15 minutes.

Circle A Bleachers are safe. Let the crowd go "wild" when the home team makes a touchdown from the forty-yard line — they can't sway Circle A Bleachers!

Steel at all points of strain means safety. Rounded seat edges, and footboards mean comfort. An easy upward slope means a clear view without a "straight-up" climb.

Send for our folder. It can show how your team can bring bigger crowds—more profitable crowds. Write today.

Circle A Products Corporation
600 South 25th Street
Newcastle Indiana

CIRCLE A BLEACHERS

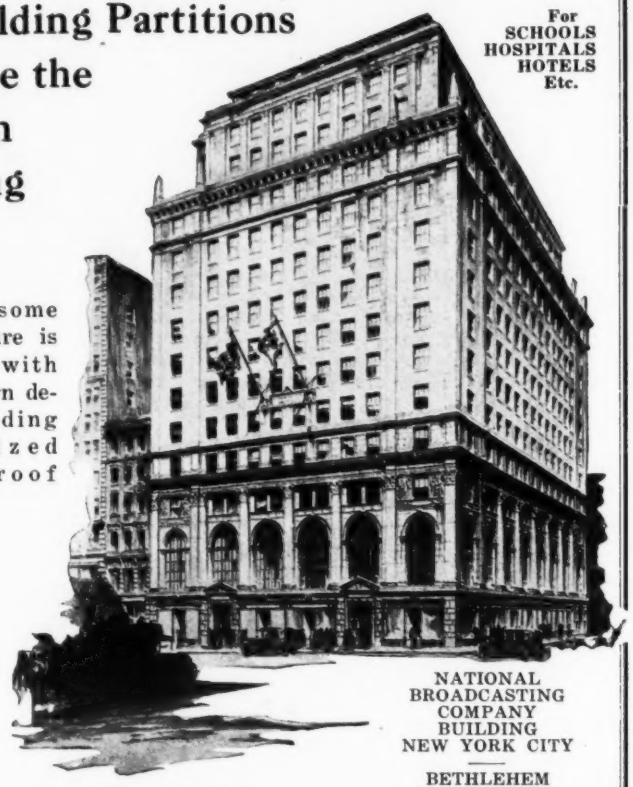
SECTIONAL AND PORTABLE

HAMLINIZED DOORS Edge-tight Sound-Proof

and Folding Partitions indicate the modern building

For SCHOOLS HOSPITALS HOTELS Etc.

This handsome new structure is equipped with every modern device, including Hamlinized Sound-Proof Doors.



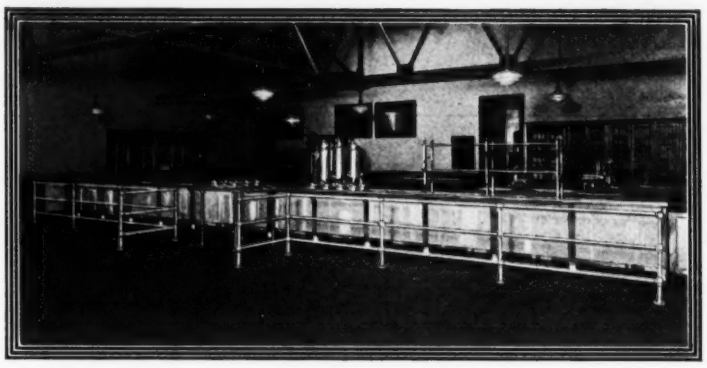
NATIONAL BROADCASTING COMPANY BUILDING NEW YORK CITY

BETHLEHEM ENGINEERING CORPORATION Architects.

Information and details sent on request.

IRVING HAMLIN

1510 Lincoln St., Evanston, Ill.



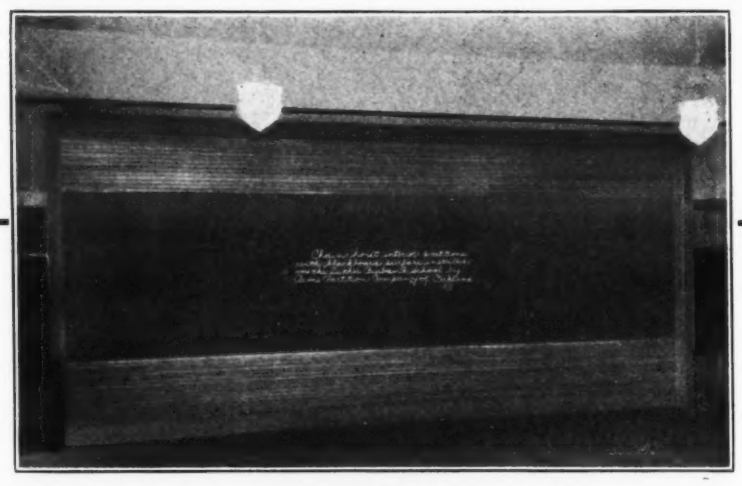
School Cafeterias

Blickman Cafeteria Equipment is built for heavy school duty. Special touches in design and construction give added convenience, save food, and labor.

Our service includes the manufacture of the complete cafeteria equipment and planning the layout for Kitchen and Cafeteria. Our engineering department solicits your inquiries—and will gladly assist you without charge or obligation to properly plan your food service room. Blickman Food Service Equipment has the benefit of 37 years of specialized experience.

S. Blickman MANUFACTURERS INC. FOOD SERVICE EQUIPMENT

532 Gregory Avenue, Weehawken, N. J.



Luther Burbank School, Stockton, California
Opening 20'-9" x 9'-8"

EFFICIENCY

The use of Acme Rolling Wood Partitions makes for efficiency in the modern school plant. The Acme Partition illustrated above provides a moving wall for practically the entire side of the room.

The blackboard surface shown is applied directly to the smooth surface of the finished wood.

The entire partition coils overhead out of the way, throwing two class rooms into one large room for assembly purposes.

Easy operation by chain hoist or hand crank is accomplished by means of exclusive Acme ball bearing shaft construction.

Send for complete details.

ACME PARTITION COMPANY, INC.

3538 Peralta Street Oakland, California

Representatives in Principal Cities

Whenever you need

PAINTED SCENERY
STAGE SETTINGS
DRAPERIES
CURTAINS
RIGGING

Let us draw up specifications and estimates

Booklet "S-1927" now in press.
Send for it.

NOVELTY SCENIC STUDIOS

340 West 41st St. New York City

A REQUISITE FOR MAINTAINING PERFECT SANITATION IN SCHOOLS

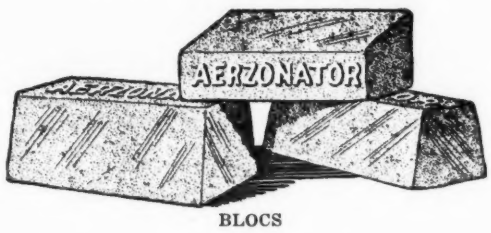


AERZONATOR

The Aerzonator is the ideal way of creating perfect toilet room sanitation. Health authorities agree it is essential in promoting hygiene.

Air is purified by means of the Aerzonator Bloc—a highly volatile compound in solidified form. Dispels foul odors. Neutralizes impurities in air. Leaves pleasing fragrance. Easily installed—Requires no attention —No parts to become out of order.

Write for particulars as to how Aerzonator Service meets requirements.



BLOCS

A valuable sanitary service at no cost to you! Write for our recommendations of adequate Disinfectants, Cleaning Materials, Polishes, Drain Pipe Solvents, Toilet Bowl Cleaners, etc., to maintain highest standard of sanitation. Write—

U. S. SANITARY SPECIALTIES CORPN.

Main Office
435 So. Western Ave.,
CHICAGO, ILL.

Eastern Branch
52 East Tenth St.
NEW YORK CITY

Palmer's MULTI-SERVICE PRODUCTS

Vacuum Electric Blackboard Eraser Cleaner



A highly efficient, serviceable piece of equipment which should be in every modern school.

Cleans erasers thoroughly, quickly, and with little labor—at low cost of operation.

Has exclusive, individual features which make it **superior:**

Brush revolving at moderate speed, acts as a beater, dislodging crayon dust and cleans more thoroughly than stationary brush — yet, does not wear and tear eraser like rapidly rotating brush attached directly to motor shaft.

Indirect drive of brush prevents overloading motor.

Cleaning table level **is adjustable** to compensate for wear in brush—thus assuring utmost service from brush and making replacement infrequent.

Oil-less bearings are used, excepting in motor—and latter requires very little attention.

Bag of **generous size** and special vacuum cleaner material increases suction efficiency of cleaner.

OPERATES FROM ANY LIGHT SOCKET—
DEPENDABLE — GUARANTEED
OF GENUINE UTILITY — NOT A TOY

May be had with Chalk Tray Cleaning Attachment.

WRITE FOR DEMONSTRATION THROUGH NEARBY DEALER

Floor Brushes
Liquid Soaps
Soap Dispensers
Paper Fixtures
Erasers

PALMER CO.
Manufacturers for the Jobber
Milwaukee. U.S.A.

Dusters
Disinfectants
Cleaners
Floor Dressings
Mops and Sticks

"—equipped by DOUGHERTY"

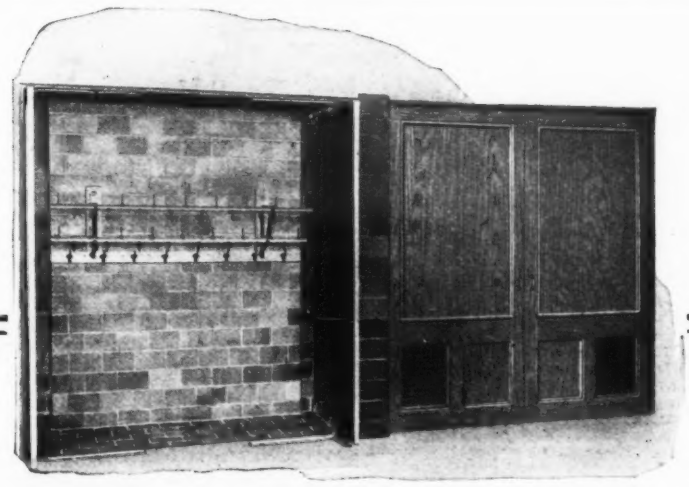


PENN CHARTER—The Oldest School in America.

When School Opens

you will want your Cafeteria equipment and supplies in good condition. We are proud of the confidence so many schools place in us to properly and promptly fill their replacement needs.

W. F. Dougherty & Sons, Inc.
1009 ARCH ST., PHILADELPHIA.
Branch: 914 Atlantic Ave., Atlantic City, N. J.



Modern Wardrobe Doors

that disappear into the wardrobe when opened, that leave the wardrobe front and the aisle entirely free and unobstructed, that need almost no swinging room—can be made with sturdy, easily attached

"Garcy" No. D80 Door Rollers and Track

Doors open at the slightest touch, receding into the wardrobe. Once on the door, and properly adjusted to the track, the rollers require no further care. Attach to any wood door, with or without blackboards.

When you build or remodel, you will want the advantages of clear aisles and easily accessible wardrobes.

Write For Descriptive Folder

Garden City Plating & Mfg. Co.
1430 So. Talman Ave., Chicago

Lantern Slides



for
Every Grade
and Teacher

An invaluable selection of interesting slide material for the grade school, high school, and college. Slide catalog No. 31 on request.

Projection Supplies

For information about Stereopticon, microscopic attachments, daylight screens, and accessories, ask for Catalog No. 21.

Victor Animatograph Co.
141 Victor Bldg. Davenport, Iowa.

Seven Important Reasons for Selecting
The Neatfit Adjustable Book Cover
For All Your Textbooks

ONE: It is made of a single piece of the highest grade stock which is as tough as cloth and will outwear three ordinary covers.

TWO: It is cut and folded true and exact.

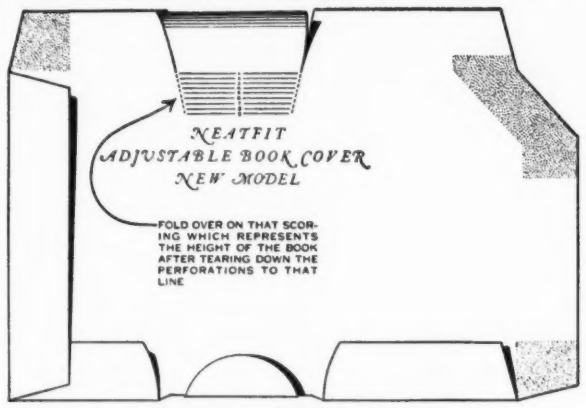
THREE: The design for adjusting the covers saves much time, enabling the pupils to do neat work in fitting the cover easily and quickly.

FOUR: It has broad gluing surfaces of sanitary glue which do not come loose.

FIVE: It is absolutely waterproof.

SIX: It fits snugly and presents an unbroken surface.

SEVEN: Considering the remarkable strength and adequate wearing qualities it has no equal in flexibility.



THE BEST BOOK COVER EVER MADE FOR SCHOOL USE

Millions of the Neatfit Adjustable Book Covers Are Sold Each Year

THE NEATFIT ADJUSTABLE BOOK COVER WILL INCREASE THE LIFE OF ANY TEXTBOOK 50%

IROQUOIS PUBLISHING COMPANY, Inc.
Home Office, Syracuse, New York
NEW YORK ATLANTA DALLAS CHICAGO

Bausch & Lomb FOR SCHOOLS Microscope

Behind B & L precision instruments are the 75 years of experience, the unequalled facilities for manufacturing, and the high ideals of America's leading optical institution. These factors insure the Inherent Quality of Bausch & Lomb products.

MICROSCOPE FS withstands the inexperience of embryo microscopists in high schools, and faithfully serves the students more expert in its use. The patented side fine adjustment *ceases to operate when objective touches slide.* The tube length is *fixed* at 160 mm. The pinion of the coarse adjustment *can not override the rack* and the objective *can not be lowered against the iris diaphragm.* The finish is reagent and alcohol proof.

Model FS-2....$71.75



"Microscopes and Accessories for Educational Institutions" will be sent upon request.

BAUSCH & LOMB OPTICAL COMPANY
680 St. Paul St.,
ROCHESTER, N. Y.

Scenery

Asbestos curtains,

Velour curtains

and

Stage scenery for your Auditorium stage.

Twenty years of experience in equipping High Schools has placed us in a position to know the particular requirements for your stage.

Write us for further information or request call from our representative.

Twin City Scenic Company
2819 Nicollet Ave., Minneapolis, Minn.
2310 Cass Ave., Detroit, Mich.

LIPPINCOTT'S SILENT READING MATERIALS

for Grades I-IV

EMMA WATKINS, University of Iowa
and
ETHEL M. HALE, Western State Normal School, Kalamazoo

GRADE I

HOW TO TEACH SILENT READING TO BEGINNERS, Emma Watkins 1.60
A simple and successful method of teaching reading for comprehension to the First Grader. Its methods are endorsed by research and results; in use with over twenty thousand teachers.

WATKINS' FLASH CARDS 5.00
To accompany HOW TO TEACH SILENT READING. Contain 182 words and phrases from sixteen of the most important lessons, in durable fibre container.

GRADE II

LIPPINCOTT'S SILENT READING FOR BEGINNERS, Emma Watkins 0.60
A supplementary text developing the comprehension, memory, and elementary organization needed in using books. The material is that of the child's experience and interest. Teacher's edition available.

WATKINS' SILENT READING TESTS, 25 sets of 24 tests each 2.00
Active seat work for individual learning combined with practical means of measuring the pupil's progress. Related in content to LIPPINCOTT'S SILENT READING FOR BEGINNERS.

GRADE III

LIPPINCOTT'S SILENT READING, THIRD BOOK
Ethel M. Hale 0.68
Factual and significant material, largely nature-study, which follows up the first steps in study reading. Thought reaction, recall, skimming, and organizing information are brought to a high level of elementary efficiency.

GRADE IV

LIPPINCOTT'S SILENT READING, FOURTH BOOK
Ethel M. Hale 0.00
Includes such interesting new materials as stories from Indian and pioneer life and industrial arts. Practices the skills learned in earlier grades and adds drills in selective judgment and other relatively high levels of reading.

J. B. LIPPINCOTT COMPANY
227 South 6th St. Philadelphia
2244 Calumet Ave. Chicago

IROQUOIS GRADED DIFFICULTY NUMBER CARDS

By DeGroat-Firman-Smith

Based on the University of Wisconsin Investigation Which Established the Relative Difficulty of the 390 Basic Number Combinations.

These Cards May Be Used Effectively With Any Basal Arithmetics

Iroquois Graded Difficulty Number Cards are the first scientific flash cards for teaching, drilling, and testing the 390 basic number combinations in addition, subtraction, multiplication, and division.

There are separate sets for each process. The cards of each set are numbered in order of difficulty. A unique color scheme and a system of group letters make possible rapid selection of groups for special drills.

Iroquois Graded Difficulty Number Cards are designed for teaching, for general drilling, for diagnostic tests, and for remedial drills. These cards have a far wider range of effective use than any other cards published. The pamphlet of Suggestions for Use which accompanies each set contains a wealth of material for the teacher.

The attractive color scheme, and the variety of drills the cards make possible, delight the pupils and stimulate them to self-improvement in number work.

ADDITION SET—100 cards. SUBTRACTION SET—100 cards. MULTIPLICATION SET—100 cards. DIVISION SET—90 cards.

Each set contains comprehensive suggestions for use.

COMPLETE EQUIPMENT. The above four sets, each in a separate container, are delivered in a most attractive desk box.

The IROQUOIS GRADED DIFFICULTY NUMBER CARDS work hand in hand with the

IROQUOIS ARITHMETICS

The Arithmetics which have set a new standard in Arithmetic Textbook Achievement.

These Arithmetics are published in a Three Book, Two Book, and Six Book Series.

IROQUOIS ARITHMETICS HAVE BEEN ADOPTED FOR USE IN SUCH LEADING EDUCATIONAL CENTERS AS PHILADELPHIA, BOSTON, CHICAGO, BALTIMORE, and ROCHESTER.

IROQUOIS PUBLISHING COMPANY, Inc.
Home Office — Syracuse, New York
NEW YORK ATLANTA DALLAS CHICAGO

Thousands of New Words

such as —

audion	amatol
relativity	junior college
overhead	realtor
C-tube	Blue Cross
vitamin	broadcast
aerial cascade	Esthonia
paravane	Hejaz
dysgenic	agrimotor
sugamo	shoneen
megabar	Fascisti
rotogravure	mystery ship
	hyzone

are clearly defined in the

"Supreme Authority"—

Webster's New International Dictionary

Write for Helps in Teaching the Dictionary, FREE.

G. & C. MERRIAM COMPANY
Springfield, Massachusetts

REVISION COMPLETE

LENNES

Test and Practice Sheets in Arithmetic

— N. J. LENNES —

For Grades 2-8

OUTSTANDING FEATURES

1. These TEST AND PRACTICE SHEETS encourage skill in all the mechanical processes and provide the **REMEDIAL WORK** necessary to correct the defects revealed by the tests.

2. The **specially selected PROBLEMS** develop power to READ and SOLVE all the essential types of problems used in everyday life.

3. The **STANDARDIZED TESTS** diagnose each pupil's needs and difficulties in all stages of all the formal processes.

4. Using the simple **SCORE CARD** each pupil records his progress from DAY to DAY and from WEEK to WEEK; and thus he is brought to recognize his need for remedial practice.

FURNISHED IN FULL YEAR AND HALF YEAR TABLETS.

Write for Further Information

LAIDLAW BROTHERS

2001 Calumet Ave. Chicago
36 West 24th Street New York

READY SOON!!

LAWS OF LIVING THINGS

By EDWARD J. MENGE, PH.D., SC.D.,
Director of Department of Animal Biology,
Marquette University, Milwaukee, Wisconsin.

A high school Biology text which presents the subject matter with reasonable completeness and thoroughness in as interesting a manner as possible, with as many personal applications as possible, and then shows the unity underlying all the Laws of Living Things.

In carrying out this purpose, the student is first permitted to study the anatomy of the form selected, then the physiology, and finally the relationship of the form to the outside world, and the relationship of the outside world to it.

The text includes 183 illustrations, practically all drawn or redrawn specially for this book with direct labeling. Each chapter is preceded by a Vocabulary, and closes with review questions.

Will be sent on ten days approval upon request.

BRUCE-MILWAUKEE

THE BRUCE PUBLISHING COMPANY

309 Montgomery Bldg. **Milwaukee, Wisconsin**

BRUCE-MILWAUKEE

American Book Company

Educational Publishers

NEW YORK, 88 Lexington Ave.
CINCINNATI, 300 Pike Street
CHICAGO, 330 East 22d Street
BOSTON, 63 Summer Street
ATLANTA, 2 North Forsyth Street

Address all communications to the nearest office of the company. Descriptive circulars, catalogues, and price lists will be mailed on request to any address.

Your correspondence is solicited and will have prompt attention.

Now ready

EVERYDAY FOODS

By

JESSIE W. HARRIS
Head of the School of Home Economics, University of Tennessee

and

ELISABETH V. LACEY
Assistant Professor of Home Economics, Cornell University

Under the Editorial Supervision of

DR. ALICE F. BLOOD
Director, School of Home Economics, Simmons College

A TEXT in food study for high schools based on the unit or meal plan

EVERYDAY FOODS is unique in treating food study as a science, comparable to the other sciences studied in school. It is the most practical, authoritative treatment of this subject for high schools that has yet appeared. From the first it trains the pupil to put into home practice the instruction received in class.

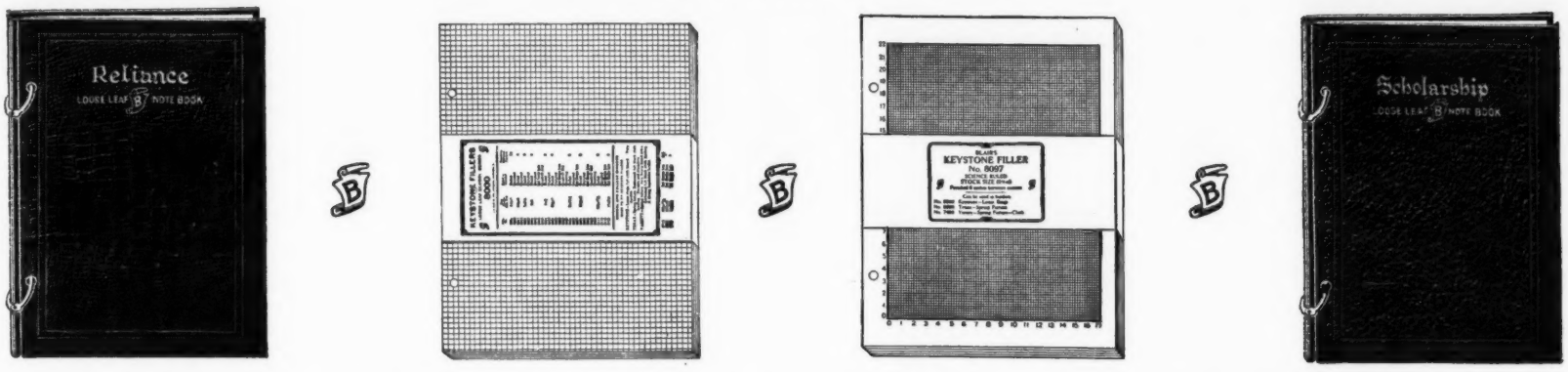
Illustrated. 525 pages. $1.56, postpaid.

HOUGHTON MIFFLIN COMPANY

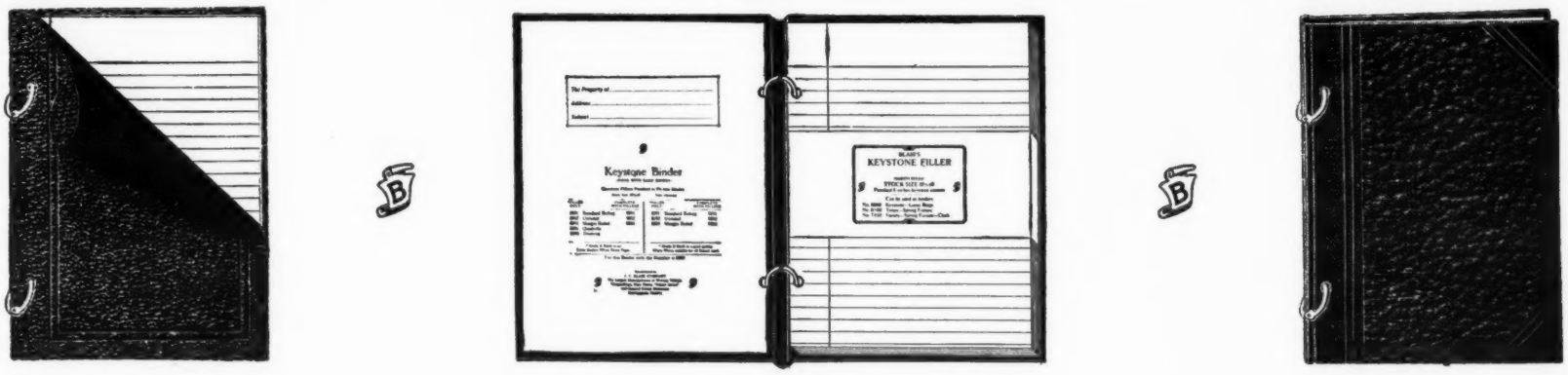
BOSTON NEW YORK CHICAGO DALLAS SAN FRANCISCO

"LOOSE-LEAF" BINDERS, FILLERS AND COMPLETES

ALL EDUCATIONAL USES



WITH A GUARANTY OF FINE MATERIAL AND SKILLED WORKMANSHIP



"PERFECT GOODS ONLY"

J. C. BLAIR COMPANY HUNTINGDON, PENN'A. U. S. A.

THE MACQUARRIE MAP AND DISPLAY RAIL

For use in schools from the kindergarten to the university, this slender steel rail with hook and tack slides, solves in the simplest way the problem of hanging maps, pictures, graphs, charts, bulletins, or any sort of illustrative matter.

Admirable for geography classes where a number of maps may be studied and slipped forward without removal from the rail; for domestic science classes and art exhibits; for the display of any material that may be suspended from hooks or tacks.

Simple, inexpensive, easily adjusted.

Send for descriptive folder

RAND McNALLY & COMPANY

(Dept. M-94)

New York CHICAGO San Francisco

536 So. Clark St.



Moore-Wilson Readers

A Step Ahead in Reading

Young minds attend eagerly when a study of phonics becomes a game with the elves or fairies as in Phonic Books I, II, and III of the Moore-Wilson Series. Readers to accompany these phonic books contain material correlated with the pupil's mastery of sounds. Fourth, Fifth, and Sixth readers introduce the child to easy classics of the sort he will most readily appreciate.

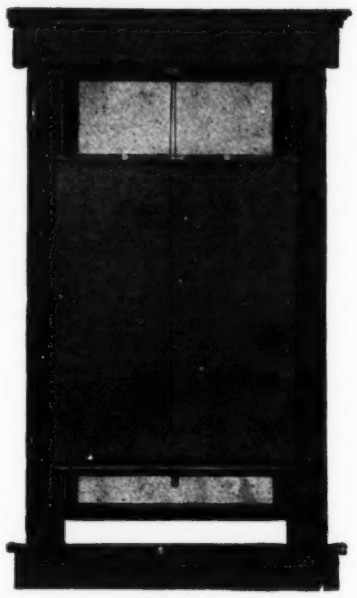
D. C. HEATH & COMPANY

NEW YORK CHICAGO BOSTON ATLANTA

DALLAS SAN FRANCISCO LONDON

DRAPER SERVICE

OUR service to schools is threefold—FIRST—Assuring a sturdy built quality shade of the best material; SECOND — A service that is invaluable in equipping your schools, namely, estimates, suggestions, and advice on shade installations; THIRD — A highly satisfactory manufacturing and distributing system, insuring quick and prompt delivery.



Patented

WE will be very glad to forward on request, a list of various schools completely equipped with Draper's Adjustable Window Shades.

For further information address

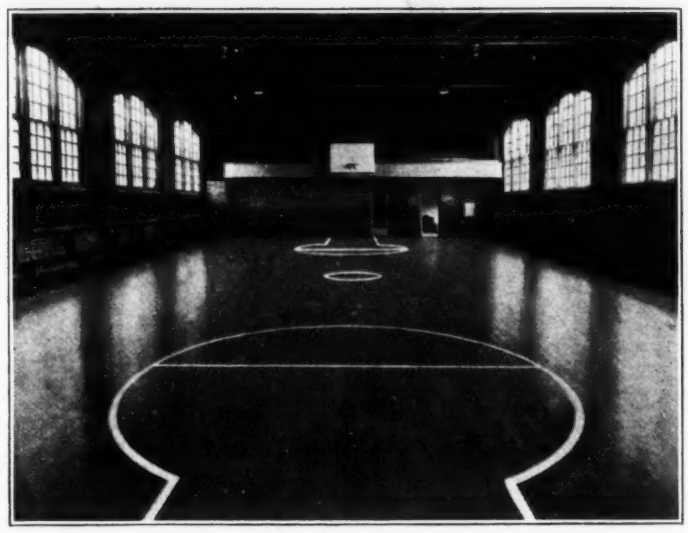
LUTHER O. DRAPER SHADE COMPANY

Spiceland, Indiana.

Use CAR-NA-VAR

TRADE MARK REG U.S. PAT OFF

THE PERFECT FLOOR TREATMENT

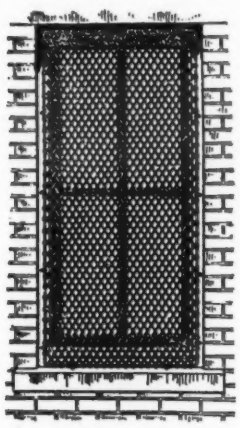


On Your Gymnasium Floor

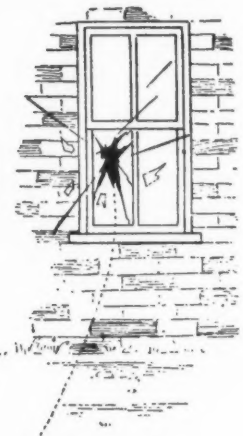
It's applied with a mop and is ready for service in an hour. Gives a hard, smooth finish, non-slippery, sanitary, the ideal surface for all gymnasium activities.

Continental Chemical Corporation

WATSEKA Dept. SJ ILLINOIS



BUY GUARDS NOT GLASS



For PERMANENT PROTECTION against damage by accident and prevent tramps and other undesirable persons from entering buildings through windows.



ORDER FROM YOUR JOBBER

BADGER WIRE & IRON WORKS

Cleveland and Twenty-sixth Avenues

MILWAUKEE ••• WISCONSIN

BOLTON HIGH SCHOOL

ALEXANDRIA, LA.

(Illustrations in August Issue This Publication)

Fully Equipped by Us
with all the Stage Requirements
of a
Modern Theatre

THIS IMPRINT

UNIVERSAL SCENIC STUDIO, INC.

ST. PAUL, MINN.

on your stage equipment is your absolute assurance that it is

DEPENDABLE

ADDRESS INQUIRIES:

H. S. REVELLI
652 Randolph Bldg.
MEMPHIS, TENN.

W. B. CLINARD
Winston-Salem
NORTH CAROLINA

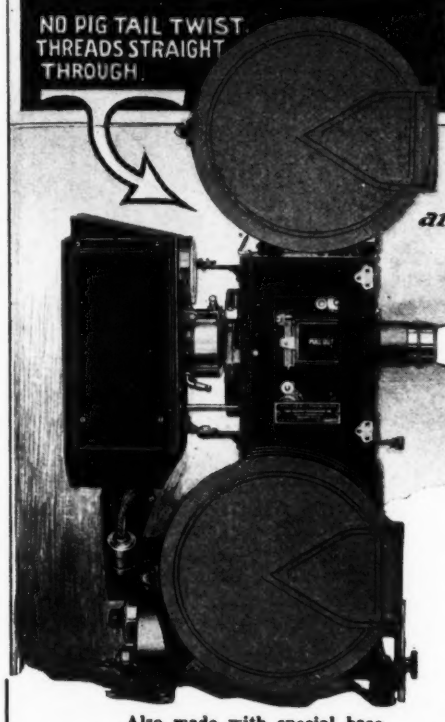
329 Van Slyke Court
ST. PAUL, MINN.

HOLMES

NO PIG TAIL TWIST
THREADS STRAIGHT
THROUGH.

MOTION PICTURE PROJECTOR

For the
ASSEMBLY HALL
and CLASS ROOMS



SHAFT DRIVE { NO BELTS OR CHAINS

Also made with special base

LOW IN PRICE

yet projects a 10 ft. x 14 ft. picture up to 100 ft., equal in quality and definition to pictures in moving picture houses.

15 Days Free Trial

Compare it with any other make; if not perfectly satisfactory, return it and your money will be cheerfully refunded. Many exclusive mechanical features, in point of ease of operation, long life, safety, adjustable take up, focus adjustment, simplicity throughout. IT HAS NO EQUAL.

That's why the United States Navy is using 25 machines. 51 being used by Hollywood's most famous celebrities, directors and producers.

Professional quality with portability. Weight 44 pounds. Can be operated from any light system, farm lighting included.

Write for interesting details.

HOLMES PROJECTOR COMPANY
1640 No. Halsted St. CHICAGO



You Receive Full Value When You Buy

FLAGS

MADE OF

Sterling and **Defiance**

All Wool Double Warp Bunting

Two Ply Cotton Bunting

THE FLAGS THAT GIVE SERVICE

Sold by dealers everywhere

MANUFACTURED ONLY BY

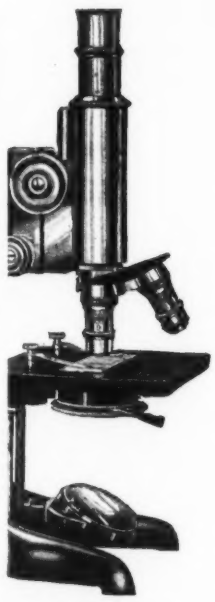
ANNIN & CO.

Fifth Ave. at Sixteenth St. NEW YORK

The Largest Flag House in the World

FEDERAL, STATE and MUNICIPAL GOVERNMENTS use more flags made of STERLING and DEFIANCE buntings than all other brands combined.

Leitz School Microscope
"Model LL"



MODEL "LL"
Especially designed for school, classroom, and laboratory use.

The acknowledged superior qualities as well as the excelling workmanship of Leitz microscopes merit the admiration of every instructor. These admitted features are predominating factors responsible for the extensive and ever-increasing demand for Leitz microscopes, resulting in the distribution of more than a quarter of a million Leitz microscopes to educational and industrial institutions throughout the world. The recognized perfection of Leitz optical and mechanical precision workmanship is as evident in the microscope Model "LL" as prevails with the Leitz Research Microscopes.

Model "LL" is simple in design and most durable in construction, meeting to the fullest degree all the requirements for student classroom and laboratory use. Standardization and simplicity of construction in addition to quality and quantity production, as results from the increased demand for Leitz microscopes, has naturally brought about a material reduction in our prices. Although formerly higher in price, Leitz Microscopes now cost no more than other instruments whose quality cannot permit of comparison to the Leitz Model "LL."

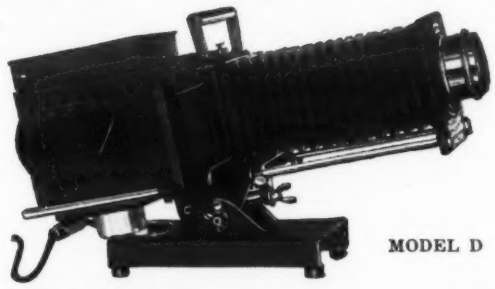
The prices for the Microscope Model "LL," complete with 2 objectives and ocular, are as low as $60.80. Slightly higher prices follow consistent with the increased optical equipment as may be selected. To Educational Institutions we grant a special discount.

ASK FOR PAMPHLET No. 1087 (DD)

60 EAST E. LEITZ INC. NEW YORK 10th STREET

FOR: AGENTS:
California, Washington, Oregon, Idaho, Utah, Nevada, Montana and Arizona:
SPINDLER & SAUPPE
Offices at Los Angeles and San Farncisco, California.

Here "IT" is!



MODEL D

The SPENCER Classroom Lantern

embodying all the special features demanded by the most particular school officials for the use of their teaching staff.

A few of the many advantages of this lantern are that it may be

1. Carried from room to room when heated, by means of a non-heat conducting handle.
2. Placed on sloping school desk and picture "squared" on blackboard or screen by means of horizontal control.
3. Used on chair or desk and machine tilted to any vertical height.
4. Operated in room with ordinary window shades by reason of powerful lens of large diameter.
5. Used in dark room and notes or manuscript lighted by means of **shaded aperture in lamp house.**

To this Model D Delineascope may be added, at any time, a Filmslide Attachment, making it a "combination" lantern accommodating both standard glass lantern slides and filmslides.

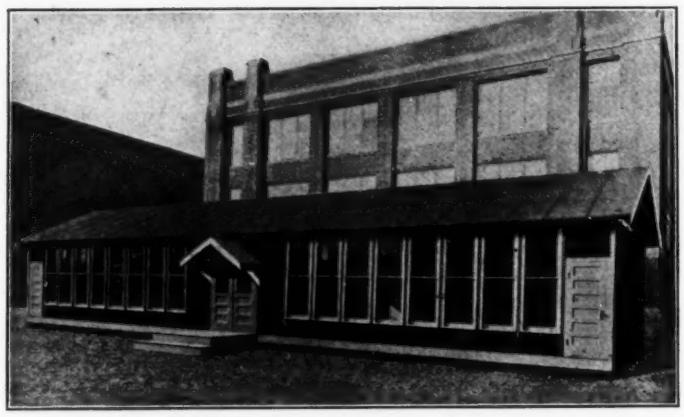
BEFORE SELECTING YOUR PROJECTION EQUIPMENT WRITE FOR K-54—sent gratis.

SPENCER LENS COMPANY
BUFFALO, N. Y.

NEW YORK SAN FRANCISCO — BRANCHES — BOSTON CHICAGO WASHINGTON

M & M

GOLD BOND PORTABLE SCHOOLS



12 Foot HIGH WALLS

Flat Ceilings. Interior Walls and Ceilings Sheet Rock Plasterboard.

Buildings Comply With All State Requirements

Built Complete at Our Factory.

Your Janitor with 4 Common Laborers and our Illustrated Instructions can erect them.

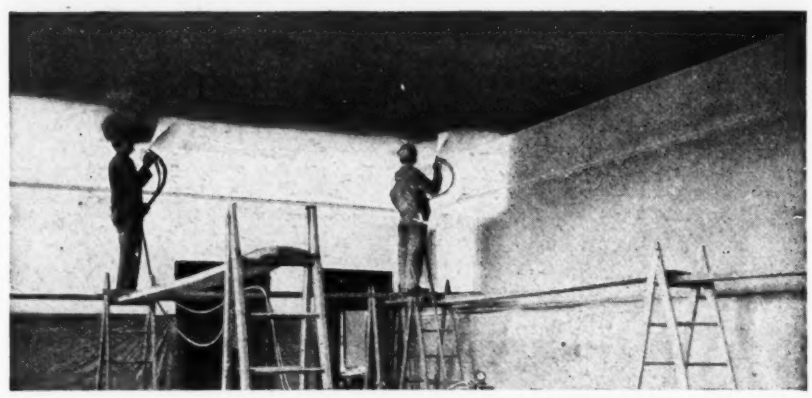
ENTIRE SATISFACTION GUARANTEED

Write for Catalog and Delivered Prices

MERSHON & MORLEY COMPANY

Established 1898

SAGINAW, MICH.



Improved Painting — Lowered Labor Costs



These two spray-painters are doing the work of 8 to 10 brush men. They are applying a smoother, more uniform coating of paint, a coating that completely covers the surface and that has the hiding power of two brushed coats. Consider this improvement in quality of work and this economy of close to 80% saving in labor cost that painting the DeVilbiss way makes possible.

The DeVilbiss Spray-painting System will enable you to do *your* school painting with the same marked degree of advantage and profit.

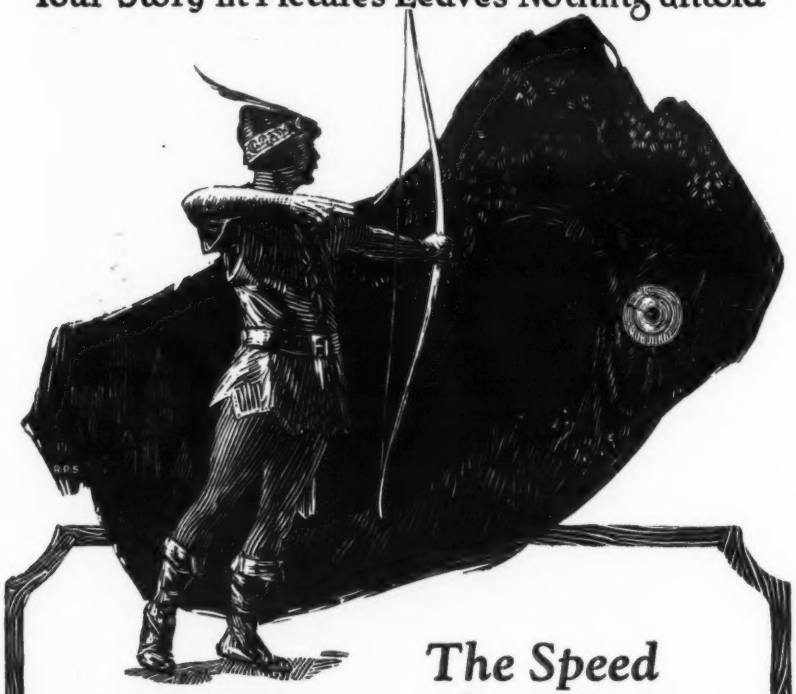
A word from you will promptly bring further interesting facts.

THE DeVILBISS CO., 268 Phillips Ave., TOLEDO, OHIO

New York—Philadelphia—Chicago—Detroit—Indianapolis—San Francisco
Pittsburgh—Cleveland—Cincinnati—Milwaukee—Minneapolis—St. Louis—Windsor, Ont.

DeVilbiss Spray-painting System

Your Story in Pictures Leaves Nothing Untold



The Speed and Accuracy of an Arrow

Your product and selling points portrayed in pictures arrive in the reader's mind instantly and unmistakably; where words most often miss the mark.

PREMIER ENGRAVING COMPANY

DESIGNERS ENGRAVERS

814 WINNEBAGO ST. MILWAUKEE, WIS.



VELOUR CURTAINS AND CYCLORAMAS
STAGE SCENERY

The Wm. Beck & Sons Co.

Established 1858

2104-2110 Highland Ave. Cincinnati, Ohio

ZASKO

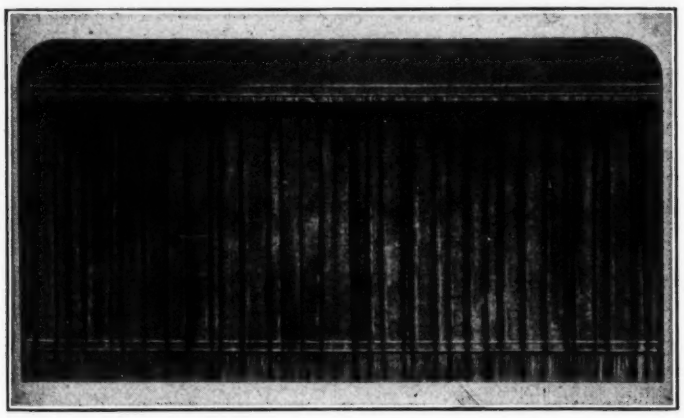
MODELING CLAY

For School and Industrial Work.

Write us for prices on any quantity from five pounds to a car load.

THE ZANESVILLE STONEWARE CO.

Zanesville, Ohio



SCENERY and STAGE EQUIPMENT

Rigging
Lighting
Scenery
Draperies
Installation
Fire Curtains
Picture Screens
Picture Settings
Portable Stages
Elizabethan Textile Sets
Lee Lash Curtain Tracks

LEE LASH STUDIOS

Formerly of Mount Vernon, N. Y.,
now at
1818-1838 AMSTERDAM AVE., NEW YORK CITY

PRINTING SERVICE

TO SCHOOLS

The Cannon Printing Co. is an organization with the knowledge, equipment and experience to render efficient, reliable and satisfactory service to schools.

Quality in set up and printing of Stationery, Forms and Blanks, Accounting Forms, Reports, High School Year Books, Bulletins and School Papers assured, together with prompt delivery at moderate prices. Consider these factors when ordering printing.

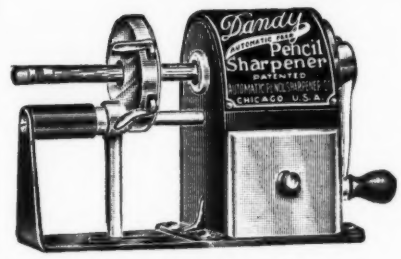
Consult with us about your school printing needs and ask for estimates. This service does not place you under any obligation.

CANNON PRINTING COMPANY
131-133-135 Michigan St., Milwaukee, Wis.

Properly Sharpened Pencils Make "Sharper" Scholars

Obtaining just the right point for the work, and getting it in a few seconds, induces efficiency in the classroom and a higher grade of work. That is why the school boards of practically every American city have shown a preference for

APSCO
Automatic Pencil Sharpeners



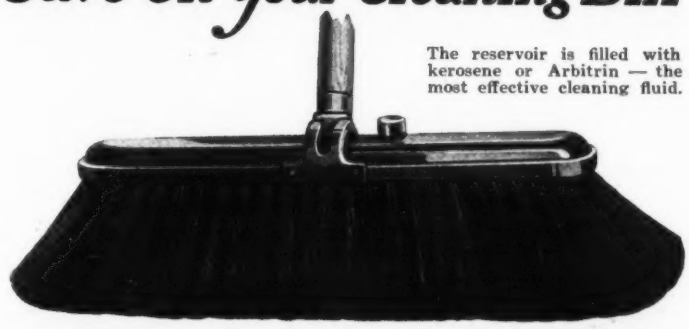
One of the 14 Models

The "DANDY" Model

The highest development of efficiency in a pencil sharpener. Automatic feed, sharpens various sizes of pencils or crayons, adjusts instantly for fine, medium, and blunt points. Ask any supply house or stationer to show you the full line of models — "Chicago," "Giant," "Junior," "Dexter," "Dandy," or "Wizard."

Automatic Pencil Sharpener Co.
58 East Washington St., Chicago, Illinois

Save On Your Cleaning Bill



The reservoir is filled with kerosene or Arbitrin — the most effective cleaning fluid.

WITH THE MILWAUKEE DUSTLESS BRUSH METHOD

TO SCHOOL SUPERINTENDENTS

It will pay you to inquire into this economical—efficient method of cleaning your school floors.



After Ordinary Sweeping

We will gladly send you further detailed information together with our special proposition to schools upon receipt of this blank.



After Dustless Brush Sweeping

School .....
Address .....
Superintendent .....

MILWAUKEE DUSTLESS BRUSH CO.
122-108 22ND STREET :: MILWAUKEE, WISCONSIN

COSTUMES
for
ALL PLAYS



We furnish Costumes, Wigs, etc., for all Plays and Operas.

THE WM. BECK & SONS CO.
Established 1858
THEATRICAL COSTUMERS
1119 Vine Street, Cincinnati, Ohio



"OBCO" STEEL FLAG POLES

They are storm and lightning proof, smooth and straight, last a lifetime, cost less than wood poles.

Our flag poles are constructed of steel pipe sections, telescoping into each other and held in place with steel pins, thereby making a tight and rigid joint.

Erection is very simple, and with the full directions furnished by us anyone can do it.

WRITE FOR CIRCULAR AND PRICES.

OTTO BIEFELD COMPANY
118 - 206 N. Water St. Watertown, Wisconsin



FIRE ESCAPES

Standard Conveyor Spiral Fire Escapes

Handle the most people in the shortest time.
Eliminate congestion.
Cost very little.
Look well.
Are in use throughout the United States.
Have stood the test of years.

Send for Catalog N.

STANDARD CONVEYOR COMPANY
North St. Paul, Minn.



Why don't you purchase the best goods for your school? Our revolving blackboards and roll blackboards have been in constant use in all the Public Schools in New York, and the principal cities for thirty-six years, which is a sufficient guarantee. Send for our illustrated catalog and discount sheet and compare prices with other manufacturers.

N. Y. Silicate Book Slate Co.
20-22-24 Vesey Street
NEW YORK

THE IMPROVED "CLICK SYSTEM" "MASTER SPECIAL" KEYLESS PADLOCK

An Achievement in Economy and Utility. Made up special for Lockers and Boxes, *in any degree* of security required.



Cut about ½ actual size.

The intense popularity of this padlock for School installations is due to its exceptional service features—economy, durability, efficiency and convenience. It is operable in the dark as readily as in the light—a feature essential to successful performance on lockers. Developed through years of intensive study of the special requirements of locker systems in schools.

Installations of "Click System" padlocks ranging from 50 to over 30,000 are achieving real Service — usually paying small initial cost in saving on lost keys. Buy experience and service—it's cheaper.

Sample and Special proposition to Operating School Officials, on request.

THE J. B. MILLER KEYLESS LOCK CO.
KENT, OHIO, U. S. A.



The **ARMSTRONG SECTIONAL SCHOOL BUILDINGS** are complete in every detail, having double floors, double side walls and ceilings. With every modern convenience makes them the best **Portable School Buildings** on the market today. With the perfect lighting and ventilation, they are without equal. Our buildings can be taken down and moved to another location without mutilating in the least any of the parts. We can prove it. If you write us what you desire, we wil. send you full details. We are specialists in Sectional School construction.

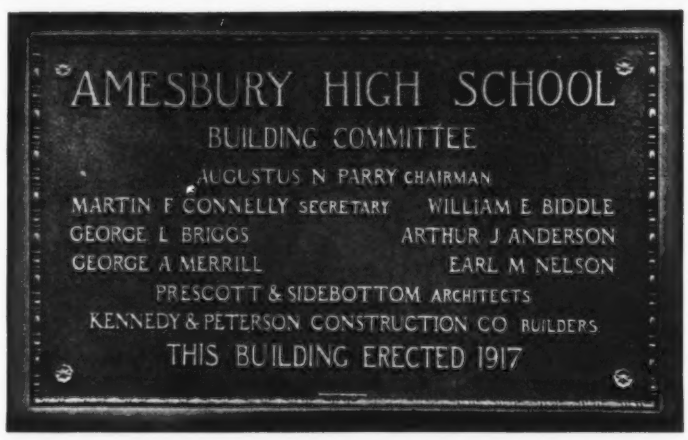
THE ARMSTRONG COMPANY, P. O., 401, ITHACA, NEW YORK

COMPLETE STAGE EQUIPMENT



SEND FOR CATALOGUE

TIFFIN Scenic Studios
TIFFIN, OHIO



HONOR ROLLS—MEMORIAL TABLETS—IN BRONZE
MODELED, CAST AND FINISHED BY
ALBERT RUSSELL AND SONS CO.
125 MERRIMACK ST. NEWBURYPORT, MASS.

THE NATIONAL ASSOCIATION OF TEACHERS' AGENCIES

The Honor Mark of Teacher Agencies

The Membership of the National Association of Teachers' Agencies includes only such Agencies as are of established reputation, and directed by competent Managers, who have the best interests of Education at heart. All members are required to subscribe to the Constitution, Platform and Code of Ethics. Each member is under pledge to do his utmost to promote the interests of his clients, consistent with his primary duty to American Education. Agencies listed below are members of the Association.

NATIONAL ASSOCIATION OF TEACHERS' AGENCIES.

The Honor Mark of Teacher Agencies

FOR PROFESSIONAL TEACHER PLACEMENT SERVICE

Albany Teachers' Agency, Inc.
74 Chapel Street, Albany, N. Y. Est. 1885
Provides Schools and Colleges with Competent Teachers.
Assists Teachers in Securing Positions.
Willard W. Andrews, President — F. Wayland Bailey, Secretary

Bryant Teachers' Bureau, Inc.
711 Witherspoon Building, Philadelphia
1213 Flatiron Building, New York City
OUTSTANDING PLACEMENT SERVICE

The Cary Teachers' Agency
36 Pearl Street, Hartford, Conn. — 14 Beacon Street, Boston, Mass.
Our business is done by *recommendation* in answer to *direct calls* from employers

"Distinguished Personnel Service"
CLARK AND BREWER TEACHERS' AGENCY
FLATIRON BUILDING NEW YORK CITY
E. L. GREGG, Mgr.
SEVEN OFFICES—One Registration for ALL

Cooperative Teachers' Agency
302 Hurst Bldg., Buffalo, N. Y.
L. E. PORTER, Mgr.
"The right teacher in the right place."
College—Normal School—High School—Grades.
Service free to school officials.

The Davis-Stewart School Service
W. T. DAVIS, Manager
Successor to the Stewart School Service
10th year
Has the Confidence of Nebraska School Men
Try us.
LINCOLN NEBRASKA

The Educators' Bureau
W. A. Myers, Manager
322 Occidental Bldg. Indianapolis, Ind.
Efficient, professional, placement service for TEACHERS and SCHOOL OFFICIALS
No advance fee — No charge to school officials

Interstate Teachers' Agency
T. H. Armstrong, Mgr.
500 Duffy-Powers Building Rochester, New York
Placed teachers in twenty-six different states last year.
Twenty years experience. Write for information

The Midland Schools Teachers' Agency
405 Youngerman Building
Des Moines, Iowa.
Situated in the heart of the land of opportunity for teachers.
H. A. Mitchell Proprietor

The purpose of the National Association of Teachers' Agencies is to enhance the value of the service of teachers' agencies to educational institutions and to teachers.

Teachers' Agencies are an educational necessity as a means of bringing into contact the purchasers of teaching qualifications and those who have such qualifications to sell.

The Parker Teachers' Agency
25th Year
State licensed and regulated
Willard N. Parker, Manager
14 So. Carroll St. Madison, Wis.

The Rocky Mt. Teachers' Agency
410 U. S. Nat. Bank Bldg. Denver, Colo.
Wm. Ruffer, Ph. D. Manager
Branch Office
Lumber Exchange Bldg. Minneapolis, Minn.

Sabins' Educational Exchange
34 years of successful experience in teacher placement work
Prompt, Efficient and Reliable Service
412 Shops Building Des Moines, Iowa
E. T. HOUSH, Manager
ANNA ALLEE, Assistant Manager

Schermerhorn Teachers' Agency
Established 1855
CHARLES W. MULFORD, Prop.
366 Fifth Ave., between 34th & 35th Sts, NEW YORK
Branch Offices: 1086 Union Trust Bldg., Pittsburgh, Pa. 1836 Euclid Ave., Cleveland, Ohio.
A Superior Agency for Superior People. We Register Only Reliable Candidates. Services Free to School Officials.

"The Agency of Quick Service and Efficiency"
Western Teachers' Exchange
Our Methods Are MODERN and PROFESSIONAL
Gas and Electric Bldg., Denver, Colo.
Pacific Division, Address Denver Office

We place teachers in the leading schools and colleges of many states.
The H. D. Yates Teachers' Bureau
1377 Arcade Building St. Louis, Missouri

VISUAL INSTRUCTION

Daylight Lanterns — Lantern Slides
Stereographs — Stereoscopes

A VISUAL AID FOR EVERY VISUAL NEED

SOCIAL SCIENCES HIGH SCHOOL SCIENCES
PRIMARY READING MAP SLIDES

Write for further information

KEYSTONE VIEW CO.
MEADVILLE, PENN'A

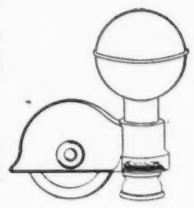
SCENERY OF QUALITY

KANSAS CITY SCENIC CO.
Since 1887
KANSAS CITY, MO.



NONCO Steel Tubular Flag Staff

Equipped with deep recessed steel couplings and NONCO Ball Bearing Halyard Carrier, so that flag flies free, instead of wrapping around Flag Staff.



Can be furnished in any height. Write for prices and information how to erect.

N. O. Nelson Mfg. Co.

St. Louis, Mo.

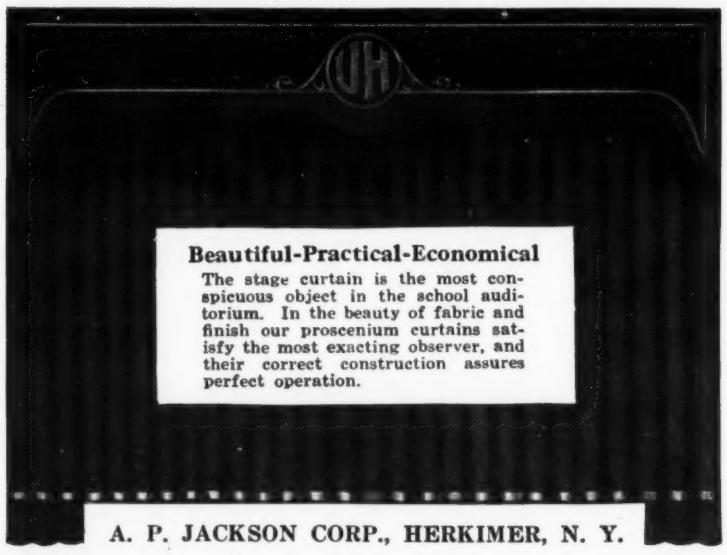
Branches

Los Angeles, Calif. — Memphis, Tenn. — Davenport, Iowa
Pueblo, Colo. — Houston, Tex. — Little Rock, Ark.
Salt Lake City, Utah — Birmingham, Ala. — Dallas, Tex.

Factories

Edwardsville, Ill. — Noblesville, Ind. — Bessemer, Ala.

Jackson Proscenium Curtain No. 26



SCENERY

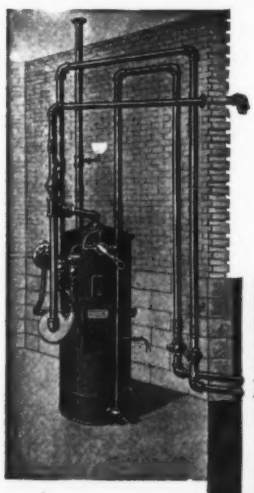
COMPLETE STAGE EQUIPMENT

Velour Curtains — Cycloramas
Draperies

"IF IT'S USED ON A STAGE—WE CAN FURNISH IT"

ACME SCENIC STUDIOS

2919-21 W. Van Buren St. Chicago, Ill.



ELECTRICALLY OPERATED, AUTOMATIC GAS MACHINE

Requires No Attention.

Write to us for list of colleges and high schools using our machine. Illustrated Catalogue Will Be Sent on Request.

MATTHEWS GAS MACHINE CO.
6 E. Lake Street CHICAGO, ILL.



This Machine Will *Automatically* Produce

GAS

For your laboratories and Domestic Science Department.
In use in hundreds of educational institutions throughout the country.

STEELE'S DUCK SHADES—Made in 15 Styles



Ask us for catalog and prices
Write us for full information and best prices.

OLIVER C. STEELE MFG. CO.
Oldest Manufacturers of Duck Shades in America

Spiceland — OLIVER C. STEELE MFG. CO. DUCK SHADES SPICELAND, IND. — Indiana

WEAR-PROOF MATS

End your mat troubles and expense.

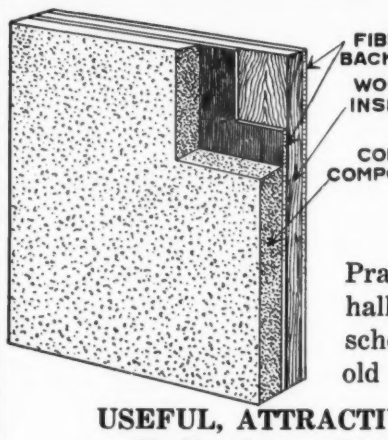
Adopted and used in over 50,000 of the best buildings, hotels, theatres, stores, banks, hospitals, schools and factories in the United States.

Built in link form of steel and asphalt impregnated wool felt, they are absolutely waterproof, which prevents them from becoming slippery and eliminates the possibility of accident. They lay flat without creep or crawl and will not warp, buckle or slip. They present a comfortable, sure-footed, safe-tread—and

"They Never Wear Out"

Ask us to show you how Wear Proof Mats will save you money, give you better, safer mats and everlasting mat service. Our Wear Proof Book, containing complete information and prices, will be sent free on request. Use the coupon.

Wear Proof Mat Co. 2172 Fulton St. Chicago, Ill.



"STANDARD" CORK Bulletin Board

THE BEST BY ANY TEST

Practical for display purposes in halls and over blackboards in schoolrooms. Easily installed in old or new buildings.

USEFUL, ATTRACTIVE and PERMANENT
We Manufacture All Sizes. Write for Sample.

STANDARD BLACKBOARD CO.
Cor. Second and Walnut Sts. ST. LOUIS, MO.



SMITH SYSTEM of HEATING and VENTILATION

The Best Solution for the Heating and Ventilating Problem for Town and Country Schools, Portable Buildings and Annexes.

Write for name of nearest distributor

SMITH SYSTEM HEATING CO.
212 Ontario St. S.E.
Minneapolis, Minn.

TEACHER AGENCIES

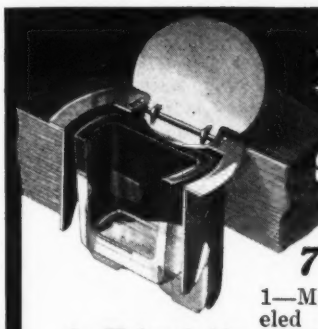
COLLEGE GRADUATES recommended exclusively —except in vocational fields. No elementary school positions. Any subject from high school up. Leading bureau for teachers of Commercial, Industrial, and Physical Education. 26th year. Covers all states. Tell us your needs.

SPECIALISTS' EDUCATIONAL BUREAU

ROBERT A. GRANT, Pres.
320 N. Grand, St. Louis, Mo.

FISK TEACHERS' AGENCY
1020 McGEE ST.
KANSAS CITY, MO,
Associated with E. O. Fisk Agencies.
J. A. DEVLIN, MANAGER

TEACHERS WANTED
For Schools and Colleges—Every day of the year
NATIONAL TEACHERS' AGENCY, INC.
D. H. COOK, Gen. Mgr. HOME OFFICE—Philadelphia, Pa.
—BRANCH OFFICES—
Pittsburgh, Pa.; Indianapolis, Ind.; Syracuse, N. Y.; Northampton, Mass.
No charge to employers—No charge to candidates till elected.
Positions waiting—correspondence confidential.



Insist that Your New Desks be Equipped with
TANNEWITZ SANITARY INK-WELLS

They Possess 7 Definite Superiorities

1—Made of heavy material—heavily nickeled or rubberized to prevent corrosion. 2—Unbreakable. 3—Spring barrel protects glass ink container. 4—Unaffected by the shrinking or swelling of desk tops. 5—Locks permanently in desk. 6—Glass ink container has no lugs to chip or break off and is easy to clean. 7—Economical—holds just the proper amount of ink—not enough to become thick and unusable.

Write for free sample for inspection.

THE TANNEWITZ WORKS
FRONT AVE., GRAND RAPIDS, MICH.

TEACHERS SUPPLIED
College Presidents, Deans, H. S. Superintendents, Boards of Education, cordially invited to report your vacancies to
THE WESTERN REFERENCE & BOND ASSOCIATION
A Teachers' Placement Bureau
John W. Million, Pres.
(Former Pres. Des Moines University)
May, June and July—the big months. Write, telegraph, telephone:
400 Gates Building — KANSAS CITY, MO. — Phone, Main 5108

SOUTHERN TEACHERS' AGENCY
Columbia, S. C. Chattanooga, Tenn.
Richmond, Va. Louisville, Ky.
Continuous registration in four offices
No advance fees
Covers Middle Atlantic, South and Middle West

THE CONTINENTAL TEACHERS' AGENCY
BOWLING GREEN, KENTUCKY
has for thirty-six years been serving school officials and teachers in every state in the Union.

ALBERT Teachers' Agency
Established 1885
25 E. Jackson Boulevard,
CHICAGO, ILLINOIS
Still under same active management. Best Schools and Colleges permanent clients. Best qualified men and women on our available list. Prompt service. Other Offices — New York, Denver, Spokane.

The Pratt Teachers' Agency
No. 70 FIFTH AVENUE, NEW YORK
Receives calls at all seasons for college and normal graduates, specialists, and other teachers in colleges, public and private schools, in all parts of the country. Advises parents about schools.

Classified Wants

BINDERS

Binders—Preserve your copies of the AMERICAN SCHOOL BOARD JOURNAL in neat and compact binders. Made to hold 12 copies—two volumes. Magazines easily inserted and held firmly in place. Priced at $1.50. Address reply to Subscription Dept., AMERICAN SCHOOL BOARD JOURNAL.

ENTERTAINMENTS

Why not use the appropriate costumes for your school plays? The cost is nominal. We handle a very complete line of costumes for rental or made to order. All are in very nice and sanitary condition. Orders promptly filled. Send for price sheets on all theatrical merchandise. Chicago Costume Works, Inc., 174 W. Randolph Street, Chicago, Ill.

LIBRARY SUPPLIES

Supplies, manuals, and all necessities for maintaining school libraries. Illustrated pamphlet "First steps in organizing the school library" sent free. Gaylord Bros., Inc., Syracuse, N. Y., and Stockton, Calif.

PICTURES

We handle a complete line of pictures for schoolroom use. Write to "The Picture House"—the house of a thousand pictures. The Bintliff Mfg. Company, 728 Central Ave., Minneapolis, Minn.

POSITIONS OPEN

(A) School Nurse wanted for the 20 schools of a district, Northwest; makes rounds with superintendent; public health training and school experience necessary; $1800 for 37 weeks' work. (B) School nurse who can handle some physical education and teach biology; North central town. (C) Strong candidates wanted for School Nurse position, Minnesota; $150 to $160 a month, at least 9 months' term. No. 1498 Aznoe's Central Registry for Nurses, 30 North Michigan, Chicago.

VOLUMES WANTED

Will pay $3.00 per volume for American School Board Journals for the years 1911-1912-1913-1914-1915-1921. Address Circulation Department, American School Board Journal, Milwaukee, Wis.

FOR SALE

Wanted—We will pay twenty-five cents for each copy of the following back issues of the American School Board Journal: January to December, 1919; January, February, March, August, October, November, and December, 1920; February, March, April, November, and December, 1921; January, March, May, June, November, and December, 1922. Address: Circulation Department, American School Board Journal, 129 E. Michigan Street, Milwaukee, Wisconsin.

POSITIONS WANTED

(A) School Dentist, age 26, Harvard graduate with post-graduate work in Children's Dentistry at Forsyth's; available for school position; West preferred. (B) Young woman dentist, age 26, one year's experience in Paedodontia, one year intern at Dental Dispensary for Children, desires Eastern appointment; asks $2600 to start. Write for our new free Booklet "Interesting Facts About Aznoe's." No. 1499 Aznoe's Central Registry for Nurses, 30 North Michigan, Chicago.

TICKETS

School Superintendents and Buyers take notice. We offer an unexcelled service to schools in the printing of tickets for all school activities. Roll, strip, or book tickets for use at games, entertainments, or in the cafeteria, and reserved seat tickets for your auditorium printed at reasonable prices. National Ticket Company, Shamokin, Pa.

Tickets in Rolls for lunchrooms and athletic events. Reserved seat tickets numbered according to seating arrangement of your Auditorium or Stadium at attractive prices depending upon number of seats. Write for samples. Rees Ticket Co., 404 South Tenth St., Omaha, Nebr.

Used In Schools Throughout America

Nibroc Paper Towels

Prove Their Economy
Satisfy Their Users



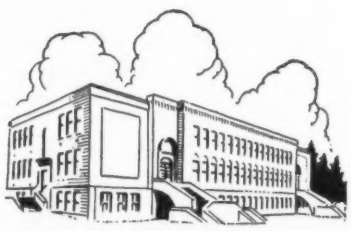
San Juan Union High School
Fairbanks, Cal.



Bryant High School
Long Island City, N. Y.



Bushwick High School
Brooklyn, N. Y.



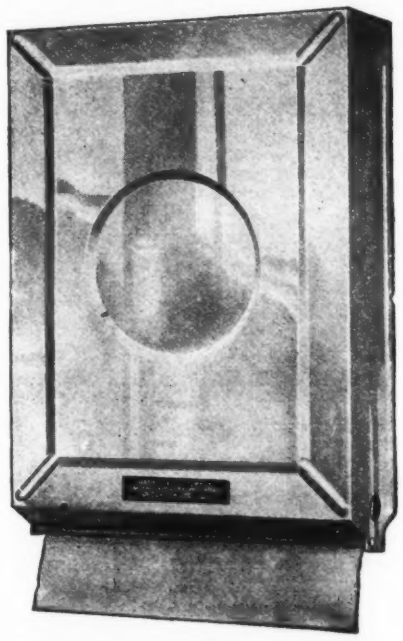
Ranier Union High Scool
Ranier, Oregon

PROMINENT schools throughout America bear witness to the economy and satisfaction found in Nibroc – the perfect paper towel. Where two ordinary paper towels are usually required—a single Nibroc will suffice. One wipes dry! Through the single distribution—one-towel-at-a-time method of Nibroc Cabinets — your towel expense is reduced to an inconsequental minimum.

Kept Clean In A-
Nibroc Cabinet

Complete towel sanitation becomes a certitude when Nibrocs are installed. Pure in content, they are packed in dust-proof wrappers — distributed and used in a manner which precludes the spreading of contagious disease.

As an added degree of sanitation, insist upon Nibrocs. They promote health in your washrooms.



The Nibroc Cabinet is clean, dust-proof and an aid to economy. It measures 10½"x15"x3¾" and is easily attached to the wall.

Write for Particulars

BROWN COMPANY

MANUFACTURERS

PORTLAND MAINE

BOSTON NEW YORK PITTSBURGH ATLANTA CHICAGO MINNEAPOLIS ST. LOUIS SAN FRANCISCO

School Board Journal

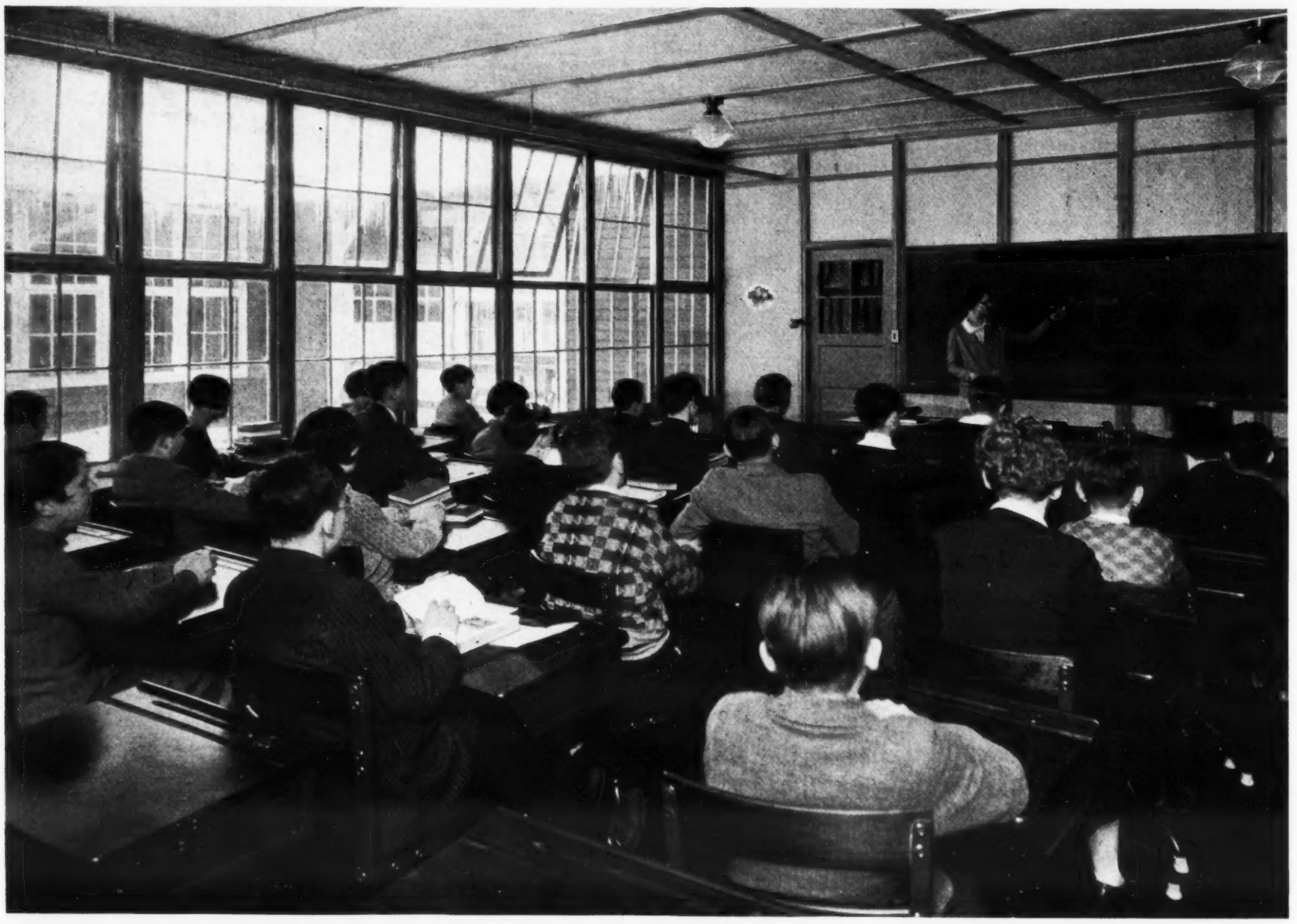
DIRECTORY OF EQUIPMENT AND SUPPLIES

The names given below are those of the leading and most reliable Manufacturers, Publishers and Dealers in the United States. None other can receive a place in this Directory. Everything required in or about a schoolhouse may be secured promptly and at the lowest market price by ordering from these Firms.

ACOUSTICS
Cabot, Inc., Samuel
Celotex Company, The
ADJUSTABLE SHELVING
Garden City Plating & Mfg. Co.
AIR CONDITIONING
American Blower Company
Buckeye Blower Company
Buffalo Forge Company
Nelson Corporation, The Herman
AIR WASHERS
American Blower Company
ALUMINUM WARE
Permalium Products Co., The
ARCHITECTS
(See Schoolhouse Architects' Directory)
ASH HOISTS
Gillis & Geoghegan
AUDITORIUM SEATING
American Seating Company
Arlington Seating Company
Derby & Company, Inc., P.
Flanagan Company, A.
Heywood-Wakefield Co.
Kundtz Company, The Theodor
National School Equipment Co.
Peabody School Furniture Co.
Rowles Co., E. W. A.
Standard Mfg. Company
Steel Furniture Company
BASEMENT SASH, STEEL
Detroit Steel Products Company
BASEMENT WINDOWS, STEEL
Detroit Steel Products Company
Lupton's Sons Co., David
BLACKBOARD CLEANER
Midland Chem. Laboratories, Inc.
Mohawk Slate Machine Co.
Oakite Products, Inc.
BLACKBOARDS—MFRD.
Beaver Products Co., Inc., The
Beckley-Cardy Company
Flanagan Company, A.
Gregory Blackboard Company
N. Y. Silicate Book Slate Co.
Rowles Co., E. W. A.
Standard Blackboard Company
Weber Costello Company
BLACKBOARD—SLATE
Flanagan Company, A.
Natural Slate Blackboard Co.
Penna. Structural Slate Co.
Rowles Co., E. W. A.
BLEACHERS
Circle A Products Corp.
Leavitt Mfg. Company
Wayne Iron Works
BOILERS
Frost Mfg. Company, The
Heggie Simplex Boiler Company
Kewanee Boiler Company
Pacific Steel Boiler Corp. of Ill.
BOILER COMPOUND
Midland Chem. Laboratories, Inc.
BOOK CASES
Rand Kardex Bureau
Peterson & Company, Leonard
Wiese Laboratory Furniture Co.
BOOK COVERS
Holden Patent Book Cover Co.
Iroquois Publishing Company
Walraven Book Cover Co., A. T.
BOOKKEEPING MACHINES
Remington Typewriter Company
BOOK PUBLISHERS
American Book Company
Bruce Publishing Co.
Gregg Publishing Company
Harter School Supply Company
Heath & Co., D. C.
Houghton, Mifflin Co.
Iroquois Publishing Company
Laidlaw Brothers
Lippincott Company, J. B.
Merriam Co., G. & C.
Winston Co., The John C.
BRUSHES
Milwaukee Dustless Brush Co.
Palmer Company, The
BUILDING MATERIAL
Asbestos Buildings Company
Detroit Steel Products Company
Duriron Co., Inc., The
Indiana Limestone Company
Lupton's Sons Co., David
Milwaukee Corrugating Company
National Assn. of Marble Dealers
Structural Slate Company
Truscon Steel Company
BUILDING STONE
National Assn. of Marble Dealers
BULLETIN BOARDS
Flanagan Company, A.
N. Y. Silicate Book Slate Co.
Rowles Co., E. W. A.
Weber Costello Company
BUSES
Graham Brothers
CAFETERIA EQUIPMENT
Blickman, Inc., S.
Dougherty & Sons, Inc., W. F.
Permalium Products Co., The
Pick & Company, Albert
Sani Products Co,. The
Standard Gas Equipment Corp.
Van Range Co., John
Wiese Laboratory Furniture Co.
CERTIFICATES OF AWARDS
Goes Lithographing Co.
CHAIRS
Beacon Steel Furniture Company
Clarin Manufacturing Co.
Derby & Company, Inc., P.
Flanagan Company, A.
Maple City Stamping Company
Rowles Co., E. W. A.
Royal Metal Mfg. Co.
Stakmore Co., Inc.
Standard Mfg. Company
CHALKS
American Crayon Company
CHARTS
Nystrom & Co., A. J.
Union School Furnishing Company
Weber Costello Company
CLEANERS—SUCTION
Super Service Co., The
CLEANING COMPOUND
Continental Chemical Corporation
Midland Chem. Laboratories, Inc.
Oakite Products, Inc.
Permalium Products Co., The
CLOCKS—PROGRAM
Hansen Manufacturing Company
Landis Eng. & Mfg. Co.
Standard Electric Time Co.
CLOTH BLACKBOARDS
N. Y. Silicate Book Slate Co.
Weber Costello Company
COMMERCIAL DEPT. FURN.
Wiese Laboratory Furniture Co.
CORK TILE AND CORK CARPET
Bonded Floors Co., Inc.
COOKING APPARATUS
Dougherty & Sons, Inc., W. F.
CRAYONS
American Crayon Company
Beckley-Cardy Company
Binney & Smith
Flanagan Company, A.
National Crayon Co.
Rowles Co., E. W. A.
Weber Costello Company
CRAYON COMPASSES
N. Y. Silicate Book Slate Co.
Weber Costello Company
CRAYON TROUGHS
Weber Costello Company
DAMP-PROOFING
Vortex Mfg. Co.
DEAFENING QUILT
Cabot, Inc., Samuel
Celotex Company, The
DESKS
Flanagan Company, A.
DESKS—OFFICE
Gunn Furniture Co.
Imperial Desk Company
Rowles Co., E. W. A.
DIPLOMAS
Goes Lithographing Co.
DISHWASHERS
Colt's Patent Fire Arms Mfg. Co.
DISHWASHING COMPOUNDS
Midland Chem. Laboratories, Inc.
Oakite Products, Inc.
DISINFECTANTS
Continental Chemical Corporation
Midland Chem. Laboratories, Inc.
Palmer Company, The
U. S. Sanitary Specialties Corp.
DOMESTIC SCIENCE EQUIP.
Christiansen, C.
Cleveland Range Co.
Dougherty & Sons, Inc., W. F.
Freeport Gas Machine Co.
Kewaunee Mfg. Co.
Peterson & Co., Leonard
Pick & Co., Albert
Sheldon & Co., E. H.
Standard Gas Equipment Corp.
Van Range Co., John
Wiese Laboratory Furniture Co.
DOOR CHECKS
Norton Door Closer Co.
Sargent & Company
DOOR HOLDING EQUIPMENT
Glynn-Johnson Corporation
Richards-Wilcox Mfg. Co.
DOORS, SOUND PROOF
Irving Hamlin
DOORS, STEEL-FIREPROOF
Detroit Steel Products Company
Lupton's Sons Co., David
DRAFTING DEPT. FURNITURE
Christiansen, C.
Kewaunee Mfg. Company
New York Blue Print Paper Co.
Sheldon & Co., E. H.
Wiese Laboratory Furniture Co.
DRINKING FOUNTAINS
Century Brass Works, Inc.
Clow & Sons, James B.
Murdock Mfg. & Supply Co., The
Nelson Mfg. Company, N. O.
Puro Sanitary Drink. Fount. Co.
Rowles Co., E. W. A.
Rundle-Spence Mfg. Company
Taylor Company, Halsey W.
ELECTRICAL EQUIPMENT
Adam Electric Company, Frank
Graybar Electric Company
ERASERS
Beckley-Cardy Company
Flanagan Company, A.
Palmer Company, The
Rowles Co., E. W. A.
Weber Costello Co.
ERASER CLEANERS
Lynn Company, James
Weber Costello Company
FENCES
American Fence Construction Co.
Anchor Post Fence Company
Cyclone Fence Co.
Page Fence & Wire Prod. Assn.
Stewart Iron Works Co., The
Wayne Iron Works
FILING SYSTEMS
Rand Kardex Bureau
FINANCES
McNear & Co., C. W.
FIRE ALARM SYSTEMS
Standard Electric Time Company
FIRE ESCAPES
Logan Co. (Formerly Dow Co.)
Potter Manufacturing Corp.
Standard Conveyor Company
FIRE EXIT LATCHES
Potter Manufacturing Corp.
Sargent & Company
Steffens-Amberg Company
Vonnegut Hardware Co.
FIREPROOF DOORS
Detroit Steel Products Co.
Lupton's Sons Co., David
FIREPROOFING MATERIALS
Asbestos Buildings Company
Milwaukee Corrugating Company
FLAGS
Annin & Co.
FLAG POLES
Biefeld & Company, Otto
Nelson Mfg. Co., N. O.
Rowles Co., E. W. A.
FLOORING
Bonded Floors Co., Inc.
Oak Flooring Bureau
Stedman Products Company
United States Quarry Tile Co.
FLOORING—COMPOSITION
Bonded Floors Co., Inc.
The Duraflex Company
Stedman Products Co.
FLOOR COVERING
Bonded Floors Co., Inc.
Heywood-Wakefield Co.
The Duraflex Company
Stedman Products Co.
FLOOR FINISHES
Continental Chemical Corporation
Midland Chem. Laboratories, Inc.
FLOORING—MASTIC
Midland Chem. Laboratories, Inc.
Moulding Brick Co., Thos.
The Duraflex Company
FLOOR TREATMENTS
Midland Chem. Laboratories, Inc.
Swan Company, The
FLOOR TILE
Bonded Floors Co., Inc.
Norton Company
Stedman Products Co.
FLUSH VALVES
Haas Company, Philip
Clow & Sons, James B.
FOLDING CHAIRS
Beacon Steel Furniture Co.
Clarin Mfg. Company
Maple City Stamping Company
Standard Mfg. Company
FOLDING PARTITIONS
Hamlin, Irving
Richards-Wilcox Mfg. Co.
Wilson Corp., Jas. G.
FURNITURE
American Seating Co.
Arlington Seating Company
Beacon Steel Furniture Company
Columbia School Supply Company
Derby & Company, Inc., P.
Detroit School Equipment Co.
Flanagan Company, A.
Gunn Furniture Company
Heywood-Wakefield Co.
Imperial Desk Company
Kewaunee Mfg. Company
Kundtz Company, The Theo.
Maple City Stamping Company
National School Equipment Co.
New York Blue Print Paper Co.
Peabody School Furniture Co.
Rand Kardex Bureau
Readsboro Chair Company
Rowles Co., E. W. A.
Royal Metal Mfg. Co.
Stakmore Co., Inc.
Standard School Equipment Co.
Steel Furniture Company
Union School Furnishing Co.
Walrus Mfg. Company
Welfare Seating Company
Wiese Laboratory Furniture Co.
GAS MACHINES
Matthews Gas Machine Co.
GLASS
Manufacturers Glass Company
GLOBES
Cram Company, The Geo. F.
Flanagan Company, A.
Nystrom & Co., A. J.
Rand, McNally & Company
Weber Costello Company
GRANDSTANDS
Wayne Iron Works
GYMNASIUM APPARATUS
Chicago Gymnasium Equip. Co.
Marietta Mfg. Co.
Medart Mfg. Co., Fred
Narragansett Machine Company
HEATERS
Smith System Heating Company
HEATING SYSTEMS
American Blower Company
American Foundry & Furnace Co.
Buckeye Blower Co.
Buffalo Forge Company
Clow & Sons, Jas. B. ("Gasteam")
Dunham Company, C. A.
Frost Mfg. Company, The
Heggie Simplex Boiler Company
Nelson Corp., The Herman
Pacific Steel Boiler Corp. of Ill.
Peerless Unit Vent. Co., Inc.
B. F. Sturtevant Co.
Webster & Co., Warren
Young Pump Company
HYDRANTS
Murdock Mfg. & Supply Co., The
INKS
American Crayon Company
INK WELLS
Squires Inkwell Company
Tannewitz Works, The
U. S. Inkwell Company
JANITORS' SUPPLIES
Continental Chemical Corporation
Dougherty & Sons, Inc., W. F.
Milwaukee Dustless Brush Co.
Midland Chem. Laboratories, Inc.
Oakite Products, Inc.
Palmer Company, The
Pick & Co., Albert
LABORATORY FURNITURE
Alberene Stone Company
Van Range Co., John
Columbia School Supply Company
Kewaunee Mfg. Company
Peterson & Co., Leonard
Sheldon & Company, E. H.
Walrus Mfg. Company
Wiese Laboratory Furniture Co.
LABORATORY SUPPLIES
Leitz, Inc., E.
LADDERS
Dayton Safety Ladder Co., The
LANTERN SLIDES
Keystone View Co.
Victor Animatograph Co., Inc.
LAUNDRY EQUIPMENT
American Laundry Machinery Co.
LIBRARY FURNITURE
Peterson & Company, Leonard
Rand Kardex Bureau
Wiese Laboratory Furniture Co.
LIGHTING FIXTURES
Beardslee Chandelier Mfg. Co.
Graybar Electric Company
Guth Compmany, Edwin F.
Holophane Glass Company
Westinghouse Elec. & Mfg. Co.
LINOLEUMS
Bonded Floors Co., Inc.
LIQUID FLOOR HARDENER
Sonneborn Sons, L.
LIQUID SOAP
Continental Chemical Corporation
Huntington Laboratories, Inc.
Midland Chem. Laboratories, Inc.
LOCKERS
All-Steel-Equip Company
Berger Manufacturing Company
Durabilt Steel Locker Co.
Lyon Metallic Mfg. Co.
Medart Mfg. Co., Fred
Narragansett Machine Company
Wilson Corp., Jas. G.
LOCKS—KEYLESS
Miller Keyless Lock Co., J. B.
Triple Metals Corporation
MATS
Wearproof Mat Company
MAPS
Cram Company, The Geo. F.
Nystrom & Co., A. J.
Rand, McNally & Company
Weber Costello Company
MEMORIAL TABLETS
Russell & Sons Co., Albert
METAL LATH
Berger Manufacturing Company
Milwaukee Corrugating Company
METAL CHALK RAILS
Milwaukee Corrugating Company
MICROSCOPES
Bausch & Lomb Optical Co.
Leitz, Inc., E.
Spencer Lens Company
MODELING CLAY
American Crayon Company
Denver Fire Clay Company
Flanagan Company, A.
Hammett Company, J. L.
Zanesville Stoneware Co., The
MOTION PICTURE MACHINES
DeVry Corp., The
Victor Animatograph Co., Inc.
PAINTS
American Crayon Company
Hockaday Company, The
Sterling Products Co., The
U. S. Gutta Percha Paint Co.
Vortex Mfg. Co.
PAINT SPRAYING EQUIPMENT
DeVilbiss Mfg. Co., The
Vortex Mfg. Co.
PANIC EXIT DEVICES
Potter Manufacturing Corp.
Steffens-Amberg Company
Vonnegut Hardware Company
PAPER
American Crayon Company
Flanagan Company, A.
PASTE
American Crayon Company
Flanagan Company, A.
PENCILS
American Crayon Company
Flanagan Company, A.
PENCIL SHARPENERS
Automatic Pencil Sharpener Co.
Flanagan Company, A.
PIANOS
Aeolian Company, The
American Piano Company
Miessner Piano Company
PLAYGROUND APPARATUS
Chicago Gymnasium Equip. Co.
Everwear Manufacturing Co.
Hill-Standard Company
Medart Mfg. Co., Fred
Mitchell Manufacturing Co.
Narragansett Machine Company
Potter Manufacturing Corp.
PLAYGROUND ENCLOSURES
Anchor Post Fence Company
PLUMBING FIXTURES
Bradley Wash Fountain Company
Century Brass Works, Inc.
Clow & Sons, James B.
Copper & Brass Research Ass'n.
Duriron Co., Inc., The
Haas Company, Philip
Hoffmann & Billings Mfg. Co.
Nelson Mfg. Company, N. O.
Never-Split Seat Company
Rundle-Spence Mfg. Company
Vogel Company, Joseph A.
POINTERS
N. Y. Silicate Book Slate Co.
Weber Costello Company

(Continued on Page 189)

You need not spend much money *to relieve over-crowded classrooms*



RELIEVE those crowded class rooms caused by excess enrollment, immediately and at low cost with Circle A Schools.

With Circle A Schools, classes can be in session, sixty-four working hours after these schools arrive.

And Circle A Schools are inexpensive to buy. They cost less to operate. They are comfortable, they make teaching easy. High, awning-type windows flood the room with light over the left shoulders of the pupils.

Circle A buildings are weather-proof. Their four-layer walls are amply insulated against both heat and cold. Circle A Schools are ruggedly built — stronger than most frame construction.

Ask for our proposal which shows the way to more efficient, less expensive schools, that immediately relieve those over-crowded class rooms. A letter, telegram, or telephone call will bring full information at our expense.

CIRCLE A PRODUCTS CORPORATION

600 South 25th St.

Newcastle Indiana

CIRCLE A SCHOOLS

School Board Journal

DIRECTORY OF EQUIPMENT AND SUPPLIES

The names given below are those of the leading and most reliable Manufacturers, Publishers and Dealers in the United States. None other can receive a place in this Directory. Everything required in or about a schoolhouse may be secured promptly and at the lowest market price by ordering from these Firms.

(Continued from Page 187)

PORTABLE SANDING MACHINES
Clarke Sanding Machine Company
PORTABLE SCHOOLHOUSES
American Portable House Co.
PROJECTION LANTERNS
Asbestos Buildings Co.
Bossert & Sons, Louis
Circle A Products Corporation
Mershon & Morley
Togan-Stiles Company
PROJECTION LANTERNS
Spencer Lens Co.
Trans-Lux Daylight Picture Screen Corp.
Victor Animatograph Co., Inc.
PROJECTORS
Bausch & Lomb Optical Co.
Holmes Projector Company
PUBLIC ADDRESS SYSTEMS
Graybar Electric Company
RANGES
Cleveland Range Company, The
RECORD SYSTEMS
Rand Kardex Bureau
REFRIGERATORS
General Refrigeration Company
REFRIGERATION MACHINES
General Refrigeration Company
REINFORCED STEEL
Berger Manufacturing Company
ROLLING PARTITIONS
Acme Partition Company
Wilson Corp., Jas. G.
SANDERS
Clarke Sanding Machine Company
SAFETY STAIR TREADS
American Abrasive Metals Co.
SASH OPERATING DEVICES, STEEL
Detroit Steel Products Company
SASH, STEEL
Detroit Steel Products Company
Lupton's Sons Co., David
SASH, VENTILATING
Detroit Steel Products Company
SCALES
Continental Scale Works
SCIENTIFIC APPARATUS
Knott Apparatus Co., L. E.
Rowles Co., E. W. A.
SCIENTIFIC APPARATUS—Electr.
SCENERY
Windowcraft Valance & Drapery Co.
Standard Electric Time Company
SCREENS—PICTURE
Trans-Lux Daylight Picture Screen Corp.
SCRUBBING EQUIPMENT
Continental Chemical Corporation
Finnell System, The
SHOWERS
Clow & Sons, James B.
Hoffmann & Billings Mfg. Co.
SIGNAL SYSTEMS
Hansen Manufacturing Company
Holtzer-Cabot Electric Company
SKYLIGHTS—METAL
Lupton's Sons Co., David
Milwaukee Corrugating Co.
SLATED CLOTH
N. Y. Silicate Book Slate Co.
Weber Costello Company
SPRAY PAINTING EQUIPMENT
Vortex Mfg. Co.
DeVilbiss Mfg. Co., The
STAFF LINERS
Weber Costello Company
STAGE CURTAINS, EQUIPMENT AND SCENERY
Acme Scenic Studios
Beck & Sons Co., The Wm.
Jackson Corp, A. P.
Kansas City Scenic Co.
Lee Lash Studios
Novelty Scenic Studios
Tiffin Scenic Studios
Twin City Scenic Company
Universal Scenic Studios, Inc.
Volland Scenic Studios, Inc.
STAGE EQUIPMENT
Windowcraft Valance & Drapery Co.
STAIR TREADS
Alberene Stone Company
American Abrasive Metals Co.
Norton Company
Safety Stair Tread Co., The
Stedman Products Co.
STATIONERS
Blair Company, J. C.
STEEL CASINGS—Doors, Windows
Milwaukee Corrugating Company
STEEL JOISTS
Truscon Steel Company
STEEL SASHES
Detroit Steel Products Company
STEEL STORAGE CABINETS
Durabilt Steel Locker Co.
Durand Steel Locker Company
Medart Mfg. Co., Fred
STEEL WINDOWS
Detroit Steel Products Company
Lupton's Sons Co., David
STONEWARE SPECIALTIES
Zanesville Stoneware Co., The
TABLES
Derby & Company, Inc., P.
Gunn Furniture Company
Mutschler Brothers Company
Rand Kardex Bureau
Rinehimer Bros. Mfg. Co.
TABLETS
Blair Company, J. C.
TALKING MACHINES
Victor Talking Machine Co.
TEACHER AGENCIES
Lupton's Sons Co., David
Natl. Assn. of Teacher Agencies
Teacher Agencies Directory
TELEPHONE SYSTEMS
Graybar Electric Company
Holtzer-Cabot Electric Company
Standard Electric Time Company
TEMPERATURE REGULATION
Buffalo Forge Company
Johnson Service Company
TOILET PAPER AND FIXTURES
A. P. W. Paper Company
National Paper Products Co.
Palmer Company, The
U. S. Sanitary Specialties Corp.
TOWELS
A. P. W. Paper Company
Bay West Paper Company
Brown Company
National Paper Products Co.
Palmer Co., The
TOILET PARTITIONS
Clow & Sons, James B.
Litterer Bros. Mfg. Company
Mills Company, The
Sanymetal Products Company
Structural Slate Company
Vitrolite Company
Weis Mfg. Co., Henry
TYPEWRITERS
Remington Typewriter Co.
Smith, L. C., & Corona Typewriters, Inc.
Underwood Typewriter Company
VACUUM CLEANING SYSTEMS
Allen & Billmyre Co., Inc.
Graybar Electric Company
Invincible Vac. Cleaner Mfg. Co.
Spencer Turbine Company, The
Super Service Co., The
VACUUM PUMPS
Nash Engineering Company
Young Pump Company
VALVES—FITTINGS
Clow & Sons, James B
VENTILATING SYSTEMS
American Foundry & Furnace Co.
Buckeye Blower Company
Buffalo Forge Company
Dunham Company, C. A.
Milwaukee Corrugating Co.
Nelson Corp., The Herman
Peerless Unit Vent. Co., Inc.
Sturtevant Company, B. F.
Young Pump Company
VARNISHES
Sterling Products Co., The
VENTILATORS
Buffalo Forge Company
Globe Ventilator Company
Ideal Ventilator Company
Lupton's Sons Co., David
Buffalo Forge Company
Christiansen, C.
Columbia School Supply Co.
Sheldon & Company, E. H.
Wallace & Co., J. D.
Wiese Laboratory Furniture Co.
WAINSCOTING
Stedman Products Co.
WARDROBES
K-M Supply Company
Wilson Corp., Jas. G.
WASTE PAPER BASKETS
National Vulcanized Fibre Co.
Penn Art Steel Works
WATER COLORS
American Crayon Company
WATER PURIFIERS
Clow & Sons, Jas. B. (R. U. V.)
WEATHERSTRIPS
Athey Company, The
Chamberlin Metal Weatherstrip Co.
WINDOWS—ADJUSTABLE
Austral Window Company
Detroit Steel Products Company
Lupton's Sons Co., David
Truscon Steel Company
Universal Window Company
Williams Pivot Sash Company
WINDOW FIXTURES
Austral Window Company
Columbia Mills, Inc.
Milwaukee Corrugating Co.
Peerless Unit Ventilation Co., Inc.
VOCATIONAL EQUIPMENT
Columbia Mills, Inc.
Williams Pivot Sash Company
WINDOW GUARDS
American Fence Construction Co.
Badger Wire & Iron Works
Logan Co. (Formerly Dow Co.)
Stewart Iron Works Co., The
WINDOWS—REVERSIBLE
Austral Window Company
Detroit Steel Products Company
Williams Pivot Sash Company
WINDOW SHADE CLOTH
Columbia Mills, Inc.
Du Pont de Nemours & Co., E. I.
WINDOW SHADES
Athey Company
Columbia Mills, Inc.
Draper Shade Co., Luther O.
Du Pont de Nemours & Co., E. I.
Maxwell & Co., S. A.
Steele Mfg. Co., Oliver C.
WINDOW SHADE ROLLERS
Columbia Mills, Inc.
Hartshorn Company, Stewart
WINDOWS, STEEL
Detroit Steel Products Company
WIRE GUARDS
Badger Wire & Iron Works
Cyclone Fence Co.
Logan Co. (Formerly Dow Co.)
Stewart Iron Works Co., The
WOODWORKING MACHINERY
Wallace & Co., J. D.

ADVERTISERS' REFERENCE INDEX

	Page
Acme Partition Company	172
Acme Scenic Studios	184
Adam Electric Company, Frank	170
A. P. W. Paper Co.	3rd Cover
Alberene Stone Company	84
All-Steel-Equip Company	102
American Blower Company	113
American Book Company	176
American Crayon Company	143
American Fence Const. Co.	170
Amer. Foundry & Furnace Co.	96
Amer. Laundry Machinery Co.	153
American Piano Company	149
American Portable House Co.	156
American Seating Company	19
Anchor Post Fence Company	167
Angle Steel Stool Company	32
Annin & Co.	179
Arlington Seating Company	30
Armstrong Company, The	182
Asbestos Buildings Co.	162
Athey Company	13
Austral Window Company.	4th Cover
Automatic Pencil Sharpener Co.	181
Badger Wire & Iron Works	178
Bausch & Lomb Optical Co.	174
Bay West Paper Company	152
Beacon Steel Furniture Co.	147
Beardslee Chandelier Mfg. Co.	72
Beck & Sons Co., The Wm.	180 & 182
Beckley-Cardy Company	34
Berger Mfg. Company	12
Biefeld & Company, Otto	182
Binney & Smith Company	144
Blair Company, J. C.	177
Blickman, Inc., S.	172
Bonded Floors Company, Inc.	73
Bradley Wash Fountain Co.	168
Brown Company	186
Buckeye Blower Company	119
Buffalo Forge Company	110
Cabot, Inc., Samuel	169
Cannon Printing Company	181
Celotex Company, The	95
Century Brass Works, Inc.	168
Chicago Gymnasium Equip. Co.	171
Christiansen, C.	32
Circle A Products Corp.	171 & 188
Clarin Manufacturing Co.	161
Clarke Sanding Machine Co.	138
Cleveland Range Co., The	171
Clow & Sons, James B.	82 & 83
Columbia Mills, Inc.	7
Columbia School Supply Co.	134 & 135
Continental Chemical Corp.	178
Continental Scale Works	146
Cram Company, The George F.	81
Cyclone Fence Company	160
Dayton Safety Ladder Co., The	160
Denver Fire Clay Company	148
Derby & Company, Inc., P.	18
Detroit School Equipment Co.	26
Detroit Steel Products Co.	77
DeVilbiss Mfg. Company, The	180
Dougherty & Sons, Inc., W. F.	173
Draper Shade Co., Luther O.	178
Dunham Company, C. A.	106
Du Pont De Nemours & Co., E. I.	112
Durabilt Steel Locker Co.	131
Duraflex Company, The	166
Durand Steel Locker Co.	74
Duriron Company, Inc., The	132
Finnell System, Inc.	109
Flanagan Company, A.	35
Frost Mfg. Company, The	116
Garden City Plating & Mfg. Co.	173
General Refrigeration Company.	159
Gillis & Geoghegan, The	163
Globe Ventilator Co.	114
Glynn-Johnson Corporation.	166
Goes Lithographing Company	142
Graybar Electric Co., Inc.	103
Gunn Furniture Company	20
Guth Company, Edwin F.	71
Haas Company, Philip	125
Hamlin, Irving	172
Harter School Supply Company.	80
Hartshorn Company, Stewart	136
Heath & Company, D. C.	177
Heggie Simplex Boiler Co.	9
Heywood-Wakefield Co.	129
Hill Standard Company	165
Hockaday, Inc.	123
Hoffmann & Billings Mfg. Co.	168
Holden Patent Book Cover Co.	89
Holmes Projector Company	179
Holtzer-Cabot Electric Co.	8
Houghton, Mifflin Company	176
Huntington Laboratories, Inc., The	152
Imperial Desk Company	24
Indiana Limestone Company	91
Invincible Vacuum Cleaner Mfg. Co.	108
Iroquois Publishing Co.	174 & 175
Jackson Corp., A. P.	184
Johnson Service Company	2
Kansas City Scenic Company	183
Kewanee Boiler Co.	3
Kewaunee Mfg. Company	133
Keystone View Company	183
K-M Supply Company	139
Knott Apparatus Co., L. E.	140
Kundtz Company, The Theodor.	23
Laidlaw Brothers	175
Landis Engrg. & Mfg. Co.	117
Leavitt Mfg. Company	167
Lee Lash Studios	181
Leitz, Inc., E.	179
Lippincott Company, J. B.	175
Litterer Bros. Mfg. Company	126
Logan Company	164
Lupton's Sons Company, David.	90
Lyon Metallic Mfg. Co.	101
McNear & Company, C. W.	92
Maple City Stamping Company.	22
Maple Flooring Mfrs. Assn.	78
Matthews Gas Machine Co.	184
Medart Mfg. Company, Fred.	105
Merriam Co., G. & C.	175
Mershon & Morley Company	180
Midland Chem. Laboratories, Inc.	11
Miessner Piano Company	150
Miller Keyless Lock Co., The J. B.	182
Mills Company, The	122
Milwaukee Corrugating Company	97
Milwaukee Dustless Brush Co.	181
Mitchell Manufacturing Co.	170
Murdock Mfg. & Supply Co., The.	168
Mutschler Bros. Company	22
Narragansett Machine Company.	164
Nash Engineering Company.	36
Natl. Assn. of Marble Dealers.	87
National Crayon Company.	30
National Paper Products Co.	157
National School Equipment Co.	27
National Vulcanized Fibre Co.	30
Natural Slate Blackboard Co.	1
Nelson Corp., The Herman.	111 & 171
Nelson Mfg. Co., N. O.	124 & 184
Never-Split Seat Company.	126
N. Y. Silicate Book Slate Co.	182
Norton Company.	76
Norton Door Closer Co.	100
Novelty Scenic Studios.	172
Oak Flooring Bureau.	166
Oakite Products, Inc.	118
Pacific Steel Boiler Corporation.	5
Page Fence & Wire Prod. Ass'n.	165
Palmer Company, The.	173
Peabody School Furniture Co.	21
Peerless Unit Ventilation Co.	85
Pa. Structural Slate Company.	169
Permalium Products Co., The.	16
Peterson & Co., Leonard.	137
Potter Manufacturing Corp.	170
Premier Engraving Company.	180
Rand Kardex Bureau.	191
Rand, McNally & Company.	177
Readsboro Chair Company.	26
Remington Typewriter Co.	136
Rinehimer Bros. Mfg. Co.	28
Rowles Company, E. W. A.	33
Royal Metal Mfg. Company.	28
Rundle-Spence Mfg. Company.	127
Russell & Sons Co., Albert.	182
Safety Stair Tread Co., The.	99
Sani Products Company.	16
Sanymetal Products Company.	10
Sargent & Company.	8
Shade Service Bureau, The.	154
Sheldon & Company, E. H.	18
Smith & Corona Typewriters, Inc., L. C.	141
Smith System Heating Company.	184
Sonneborn Sons, L.	10
Spencer Lens Company.	179
Spencer Turbine Company.	4
Squires Inkwell Company.	34
Stakmore Company.	31
Standard Blackboard Co.	184
Standard Conveyor Company.	182
Standard Electric Time Co., The	38
Standard Gas Equipment Corp.	155
Standard Manufacturing Co., The	28
Standard School Equipment Co.	20
Steele Mfg. Company, Oliver C.	184
Steel Furniture Company.	29
Steffens-Amberg Company.	98
Stewart Iron Works Co., The.	146
Sturtevant Company, B. F.	115
Super Service Company, The.	163
Tannewitz Works, The.	185
Taylor Company, Halsey W.	107
Tiffin Scenic Studios.	182
Togan-Stiles Company.	88
Triple Metals Corp.	94
Truscon Steel Company.	106
Twin City Scenic Company.	174
Underwood Typewriter Co.	145
Union School Furnishing Co.	34
U. S. Gutta Percha Paint Co.	121
U. S. Inkwell Company.	24
United States Quarry Tile Co.	75
U. S. Sanitary Specialties Corp.	113
Universal Scenic Studio, Inc.	178
Universal Window Company.	12
Van Range Company, John.	17
Victor Animatograph Co., Inc.	174
Victor Talking Machine Co.	151
Vitrolite Company.	86
Vogel Co., Joseph A.	2nd Cover
Vonnegut Hardware Company.	6
Vortex Mfg. Company.	93
Wallace & Company, J. D.	32
Walraven Book Cover Co., A. T.	169
Wayne Iron Works.	158
Wearproof Mat Company.	184
Weber Costello Company.	25
Weis Mfg. Company, Henry.	192
Welfare Seating Company.	26
Wiese Laboratory Furniture Co.	128
Williams Pivot Sash Co., The.	116
Wilson Corp., Jas G.	79
Zanesville Stoneware Co., The.	180



MIRACLE!

"Aw, Mom, my head hurts Awful. Do
I have to go to School today?
It is hot, too—your hands are cold.
Mom, don't you think I'd better lay
Still awhile? What time is it?
Of course I'll go if this'll quit.

No, m'm, I couldn't eat a thing.
We-ell, I c'n try an Egg, I guess.
No—no milk; Chocolate—an' sweet.
We-ell, if you have it toasted—yes.
O-ooh! A Pain! Of course it's Bad.
No—no, you needn't send f'r Dad.

I guess I'll try an' sleep a bit.
Maybe that'll help it—Gee!
Well, I can't help it—It feels hot.
No, don't git no Doctor f'r me.
What time is it? Not Eight yet!
That Clock needs windin' bad, I bet.

Aw, Mom, I don't want to—I'm Sick.
It's too late now—that Clock is slow.
I didn't hardly eat a thing!
I'm not THAT bad! Wait—WAIT! I'll go!
I'll say Mom ain't nobody's fool—
Castor-Oil is worse than School!"

—R. E. Alexander.

Perfect Behavior

The boys and girls were invited to write their own personal rules of life. The collection included the following:—

"You must always be obigent, clean your neck, stand ereck, and swallow good fresh hair."

"Don't get nosey or hit anybody with cross eyes because it gives you bad luck."

"Never try to steal a dog's bone or you'll have no pants."

"Always live fair and never ask your father or uncle for money when they are drunk."

"Don't steal and if you hit a girl you are a coward."

"Every week you must have a bath and don't do no murderin."—Collier's

Did He Mean It?

First Western Teacher (viewing exhibits at the Dallas convention.)—"Jove, these school displays are magnificent—these Southern educators are not like us."

Second W. T.—"Brainy, aren't they?"

Higher Learning

Charles Fastov, who teaches English to foreigners at City College, asked one of his pupils:

"What is a footpath?"

"A footpath?" repeated the student. "Vy, vat you wash de feet, no?"—N. Y. World.

Puzzling to Any Boy

The teacher explained to the class about the sun and its doings.

"What I can't understand, miss," said one youngster, impressed by the story of millions of miles distance from the earth, "is how the sun's light manages to get here so early in the morning without traveling at night."

Unavoidable

For homework the class had been told to write about "Mother."

Next day when the exercises were being corrected, the master found two of the compositions, the work of two brothers, exactly alike.

"Tom," he said, "how is it that you've written just what your brother wrote?"

"Well, sir," was the reply, "you see, it's the same mother."

Proved His Discovery

The wife of the professor beamed at him across the supper table.

"But these," she exclaimed, pointing to the dish of mushrooms that had been set before her, "are not all for me, Ethelbert, are they?"

"Yes, Bertha," he replied, smiling. "I gathered them especially for you with my own hands."

She beamed upon him gratefully. What a dear, unselfish old husband he was? In a few minutes she had eaten them all.

At breakfast the next morning he greeted her anxiously.

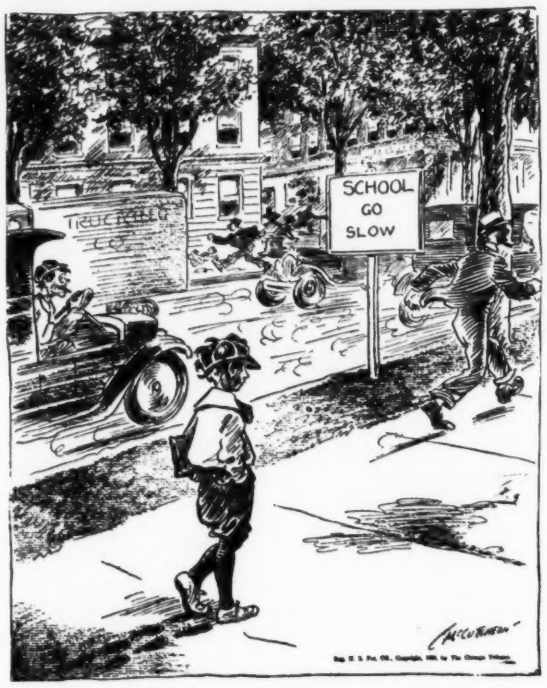
"Sleep all right?" he inquired.

"Splendidly," she answered.

"Not sick at all—no pains?" he pressed.

"Why, of course not, Ethelbert," she responded.

"Hurrah, then!" he exclaimed. "I have discovered another species of mushroom that isn't poisonous."



HOW FEW ACCIDENTS IF THEY ALL OBEYED THE SIGN AS ZEALOUSLY AS HE!—Chicago Tribune.

She Thought He Was Asking!

She was still rather new at driving a car and a little bit confused in traffic. Down Broadway she forgot to stop soon enough at the signal and shot out into the middle of the street.

Pompously the traffic officer bore down upon her.

"Didn't you see me hold up my hand?" he shouted fiercely.

The culprit gasped a breathless "Yes."

"Didn't you know that when I held up my hand it meant stop?"

"No, sir; I am just a school-teacher," she said, in a timid, mouselike voice, "and when you raised your hand like that I thought you wanted to ask me a question."—Jol. of Am. Med. Assn.

BUYERS NEWS

DEATH OF RANDOLPH McNUTT

Randolph McNutt, president of the Randolph McNutt Company, and one of the pioneers in school furniture in the upper section of New York state, died July 22 at the Markeen Hotel in Buffalo. Mr. McNutt was 76 years of age.

Mr. McNutt was graduated from Warrensburg Academy and Dartmouth College and the firm which bears his name was established in 1884. His benefactions were in the form of aid to young men entering Dartmouth College.

Theater Seating for Public-School Auditoriums

The American Seating Company has issued a large catalog, illustrating and describing theater seating for school auditoriums. The booklet shows examples and uses of theater seating in a variety of designs, colors, and finishes, each of which is the best that can be obtained for comfort, artistic design, and durability in service.

The booklet is more than a catalog. The entire problem of providing comfortable and beautiful seating for the school auditorium is discussed in a thorough, but popular style. The very beauty of the materials, the design, and finish is the last word in making the auditorium artistic and therefore attractive to school patrons. The American Seating Company has for many years studied the problem of theater seating from the standpoint of aesthetics, comfort, etc., and the present catalog is evidence of the superb way it is meeting the problem and is giving school auditoriums the final touch of perfection.

Durand Company Removes Offices

The Durand Steel Locker Company has announced the removal of its Cleveland offices from 12524 Euclid Avenue to the Euclid-30th Building. Mr. J. P. Walsh is the director in charge of the Cleveland offices.

New Telescopic Hoist Catalog

A new G. & G. telescopic hoist catalog for the use of architects and engineers has just been issued by the Gillis & Geoghean Company, 551 West Broadway, New York City.

The catalog describes and illustrates electric and handpower models, and includes special sections devoted to watertight sidewalk doors with automatic opening, closing-locking device, and safety spring-guard gates. Model specifications are included for each model hoist which will be found useful for the architect and engineer in charge of the erection of a building.

The G. & G. hoists are simple in construction, and their operation is readily understood by the ordinary laborer or employee. All parts are of durable materials and may be expected to withstand rough daily handling. The design, construction, and excellent quality of the material are an indication of the splendid service which this equipment may be expected to give the user.

Columbia School Supply Company Occupies New Building

The Columbia School Supply Company, of Indianapolis, Indiana, is preparing to occupy its new and enlarged factory building at 314 West 17th Street, Indianapolis. The building as it stands represents three sections of an enormous plant. The present section is the third and last to be erected and adjoins the former building on the north and east. The building now has 58,000 feet of additional floor space in an entirely fireproof structure.

The building is equipped with three electric elevators and a spiral chute for handling materials. The entire north front is arranged with doors as in a freight house so that goods of the firm may be taken out to the loading platform and railroad siding which runs the entire length of the structure. The building is equipped with every convenience known for the economical handling of merchandise. The floor construction is of the heavy-duty type and is capable of supporting a dead load of 200 pounds to the square foot.

The building in its present arrangement offers improved and enlarged facilities for the manufacture, distribution, and shipping of school furniture and supplies and is an indication of the splendid way in which the firm is meeting the school-supply demands of the country.

Standard Sizes for Blackboards

A conference of manufacturers and wholesalers of artificial blackboards held recently in Chicago through the initiative of the United States Department of Commerce has decided to simplify the manufacturing practices. In the future, blackboards will be made in one color—black, and will be limited in size to eight standard widths and thirteen standard lengths.

Until April 1, 1928, the manufacturers will continue to supply boards in green and brown and to make them in the eighteen widths and 90 lengths which previously were permitted.



NEW BUILDING OF THE COLUMBIA SCHOOL SUPPLY COMPANY AT INDIANAPOLIS.



Class in filing at the Omaha Technical High School, Omaha, Neb., using L. B. Practice Outfits. This school is but one of hundreds that have standardized on the "Library Bureau Practice Method of Teaching Filing."

Teach Filing This New and Fascinating Way!

GO into a bookkeeping class and note the enthusiasm shown by the students for the miniature bookkeeping practice outfits, which "set up each student in business for himself."

Until a few years ago there was no such interesting method of teaching filing. Lectures on filing theory constituted the only available method of teaching this highly interesting subject. So . . . Library Bureau invented the L. B. miniature practice outfit for teaching filing in schools, and since that time over 400 schools throughout the country have accepted it as being the *ideal* method for filing instruction.

Filing theory is a dull subject . . . filing practice is fascinating. Filing theory gives but a vague conception of the science . . . but *filing practice* approximates actual experience in a business office.



This is one of the filing "cabinets" with guides, folders, and correspondence in the L. B. Practice Outfit provided for each student.

That is why students *enjoy* studying with the L. B. miniatures of standard filing systems used in business today. The texts are simple, logical and easy to grasp, and when used in conjunction with the miniature L. B. Practice Outfits will help you make filing an interesting subject to teach.

The coupon below will bring you full information about the educational value of the "L. B. Method of Teaching Filing." Library Bureau Division, Rand Kardex Service, Dept. S.B.J.9, Tonawanda, N. Y.



Library Bureau

DIVISION OF REMINGTON-RAND

READY FOR YOU! A new edition of "A Broader Opportunity for Community Service" has just been printed. This booklet explains in detail the operation of the L. B. miniature practice outfits for teaching filing in schools. A free copy is yours for the asking. Just mail the coupon.

MAIL THIS COUPON TODAY!

LIBRARY BUREAU, DEPT. S.B.9
RAND KARDEX SERVICE CORP.
TONAWANDA, N. Y.

☐ We are interested in your "Practice Plan for Teaching Filing in Schools." Have the L. B. man tell us more about it.

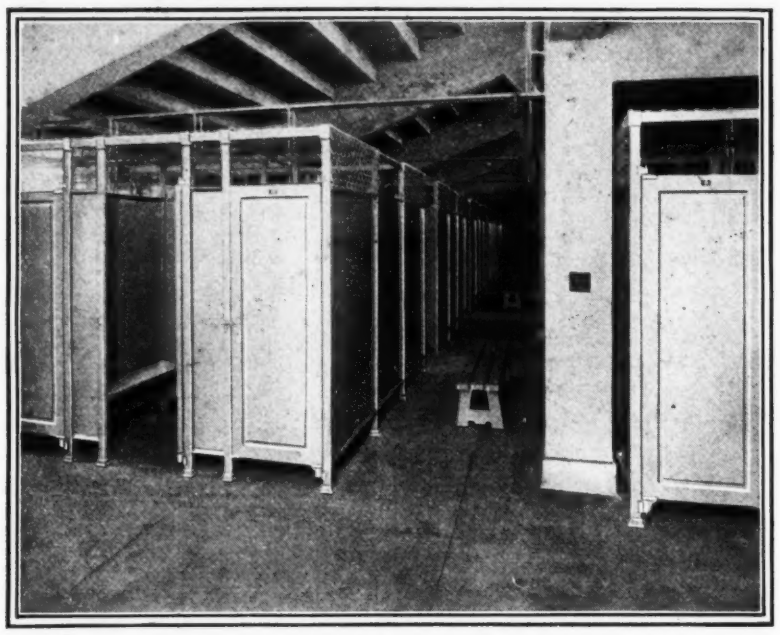
☐ Please send a free copy of your new booklet "A Broader Opportunity for community Service."

Name of Commercial Department Head..... or School Principal

School.....

City.. ..... State.....

WEISTEEL
TRADE MARK REGISTERED



Glendale High School
Glendale, California

Austin & Ashley, Architects

Meeting the hard requirements of school knocks

Because Weisteel Compartments are built for lasting service and withstand the hard wear and tear of school children, they are being increasingly specified by architects. The Weisteel Compartments are especially designed to eliminate ledges or crevices which catch or hold dirt. The finishes are not only durable but easily cleaned.

Under the Weisteel Cooperative Plan, these compartments are easy to order. Just send us a simple layout of your space and plumbing facilities and we will send full recommendations and quotations without obligation.

The New Weisteel Integral Shower Stall

There is a definite need for a practical, durable, and leak-proof shower unit at an economical price.

The Weisteel Shower Stall has been made to fill this need.

Weisteel Dominant Features:

1. 16 gauge Keystone copper-bearing, rust-resisting, furniture steel.
2. Weisteel special-design universal hinges, simple, fool-proof, durable.
3. Weisteel doors are electrically welded into one solid unit. Foot castings are brass. Brass latch and pull are nickel plated.
4. All joints are closed and sealed. No flat surfaces to catch and hold dirt.
5. Pleasing yet practical designs harmonize with other quality equipment.
6. Weisteel Cooperative Plan saves you time and cost.

WEISTEEL
TRADE MARK REGISTERED
COMPARTMENTS

HENRY WEIS MANUFACTURING CO., INC.
Elkhart, Indiana (Formerly Atchison, Kansas)

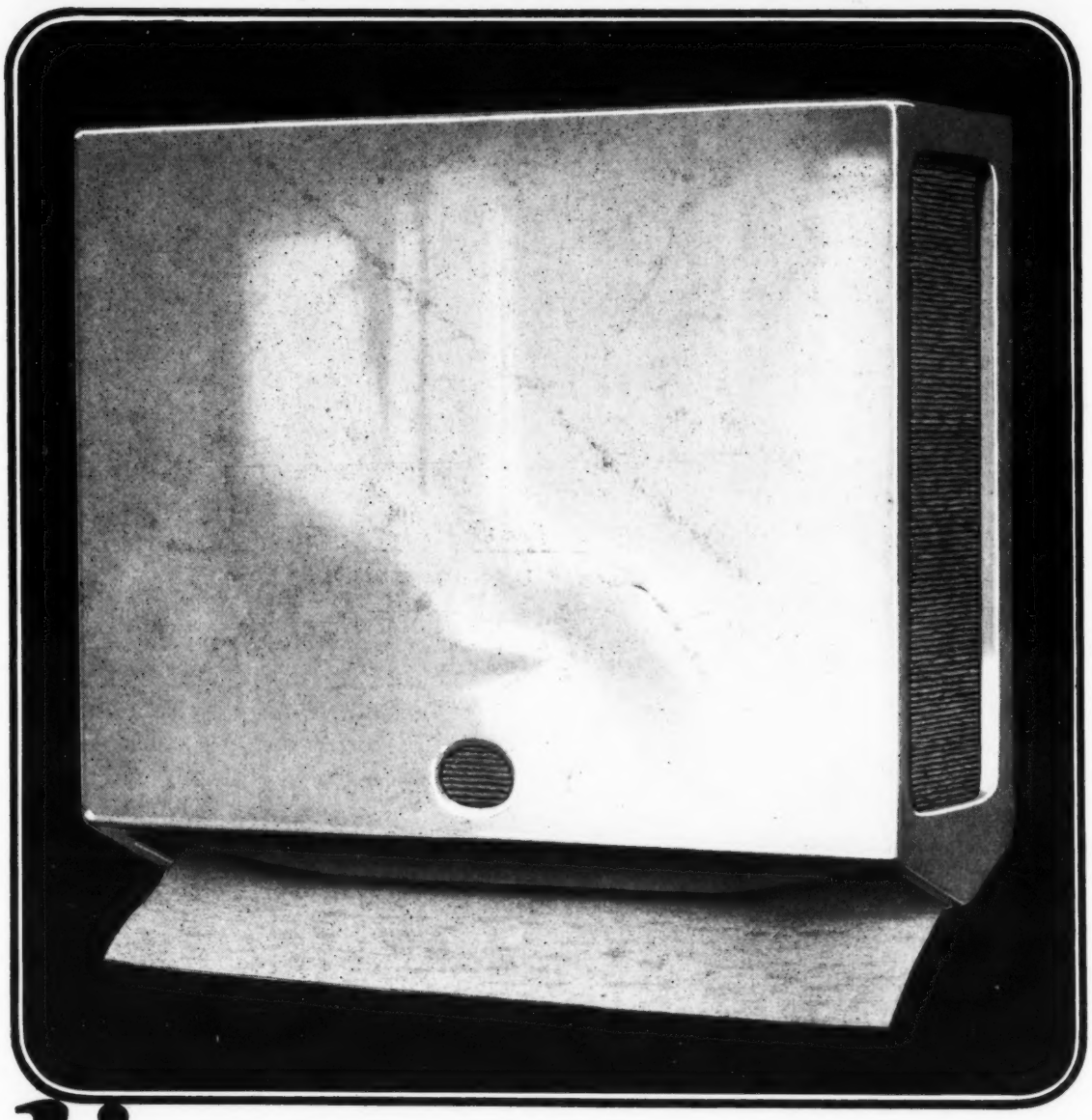
Branch Offices:
NEW YORK CHICAGO LOS ANGELES
BOSTON ATLANTA

Representatives in all Principal Cities
Established 1876

Toilet and Shower Compartments

Dressing Room Partitions

Hospital Cubicles



Onliwon
REG. U. S. PAT. OFF.
PAPER TOWELS

In the Washrooms of Up-to-date Schools

You'll find Onliwon Paper Towel Service in the washrooms of up-to-date schools in all parts of the country.

Executives insist on Onliwon on an economy basis, for linen towel service can't compare with Onliwon Paper Towel Service for economical maintenance.

Onliwon paper towels are highly absorbent. A single towel dries hands and face quickly—with comfort and satisfaction. The cabinets are good-looking, trouble-proof, and easy to refill. They require a minimum of attention, for a casual glance shows whether a refill is needed.

A. P. W. PAPER CO., ALBANY, N. Y.

Schools of Morris W. Maloney, Springfield, Mass. Equipped With Austral Windows



Ludlow High School, Ludlow, Mass.

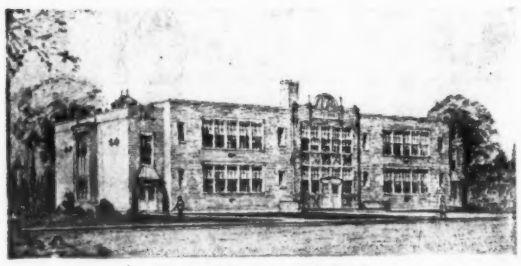


Samuel Bowles School
East Springfield, Mass.

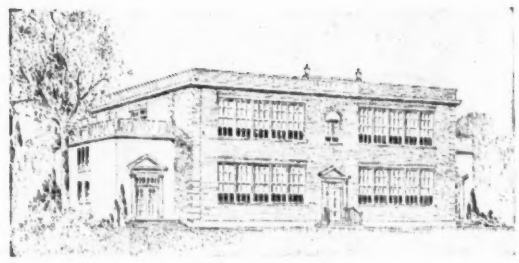




Rushville School
Springfield, Mass.



Frederick Harris School
Springfield, Mass.

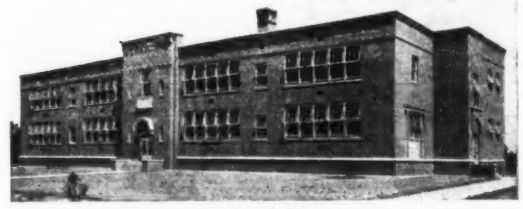


Palmer School
Palmer, Mass.



Kings Highway School
West Springfield, Mass.

Ventilation Without Draft



Balliet School
Springfield, Mass.

Standard School Equipment

Austral Windows are part of the architects' standard equipment for their schools. Economy is an essential feature of the Austral System of Ventilation. Time and again substantial savings have been realized, amounting to 20 and 25% in the cost.

101 PARK AVE **AUSTRAL WINDOW CO.** NEW YORK CITY